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INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONFIDENTIAL

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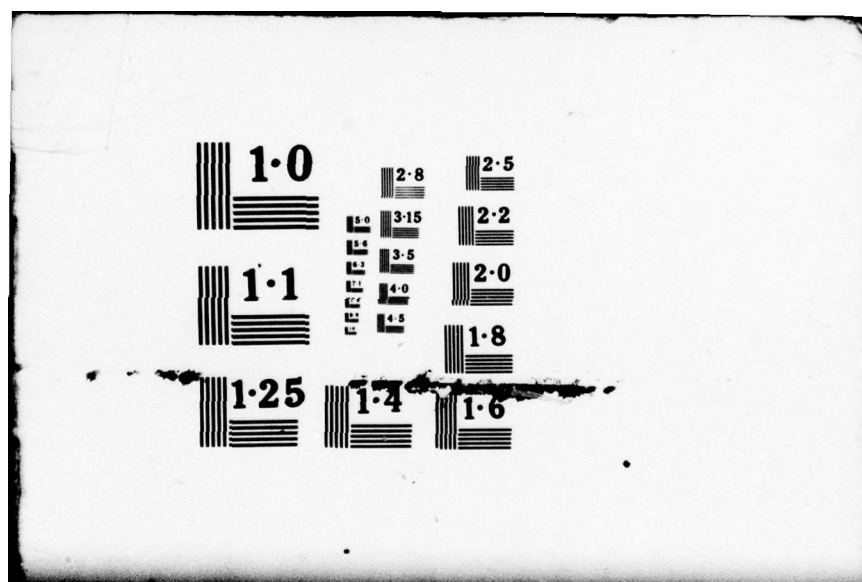
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**INTERACTIONAL AERODYNAMICS OF THE SINGLE  
ROTOR HELICOPTER CONFIGURATION**

**VOLUME VI-C - One-Third Octave Band Spectrograms of  
Wake Single Film Data, Hubcaps and Air Ejectors**

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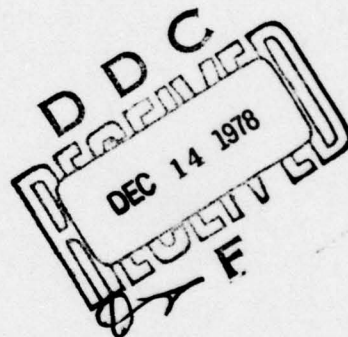
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## PREFACE

The entire report describing the investigation of **INTERACTIONAL AERODYNAMICS OF THE SINGLE-ROTOR HELICOPTER CONFIGURATION** comprises eight numbered volumes bound as 33 separate documents. The complete list of these documents is as follows:

### **Volume I, Final Report**

### **Volume II, Harmonic Analyses of Airframe Surface Pressure Data**

- A — Runs 7-14, Forward Section
- B — Runs 7-14, Mid Section
- C — Runs 7-14, Aft Section
- D — Runs 15-22, Forward Section
- E — Runs 15-22, Mid Section
- F — Runs 15-22, Aft Section
- G — Runs 23-33, Forward Section
- H — Runs 23-33, Mid Section
- I — Runs 23-33, Aft Section

### **Volume III, Flow Angle and Velocity Wake Profiles in Low-Frequency Band**

- A — Basic Investigations and Hubcap Variations
- B — Air Ejector Systems and Other Devices

### **Volume IV, One-Third Octave Band Spectrograms of Wake Split-Film Data**

- A — Buildup to Baseline
- B — Basic Configuration Wake Explorations
- C — Solid Hubcaps
- D — Open Hubcaps
- E — Air Ejectors
- F — Air Ejectors With Hubcaps; Wings
- G — Fairings and Surface Devices

### **Volume V, Harmonic Analyses of Hub Wake**

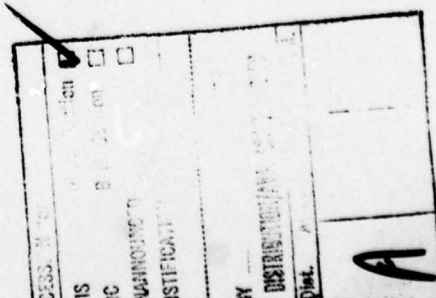
### **Volume VI, One-Third Octave Band Spectrograms of Wake Single Film Data**

- A — Buildup to Baseline
- B — Basic Configuration Wake Exploration
- C — Hubcaps and Air Ejectors

This volume is

### **Volume VII, Frequency Analyses of Wake Split-Film Data**

- A — Buildup to Baseline
- B — Basic Configuration Wake Explorations
- C — Solid Hubcaps





- D - Open Hubcaps
- E - Air Ejectors
- F - Air Ejectors With Hubcaps; Wings
- G - Fairings and Surface Devices

**Volume VIII, Frequency Analyses of Wake Single Film Data**

- A - Buildup to Baseline
- B - Basic Configuration Wake Exploration
- C - Hubcaps and Air Ejectors

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## INTRODUCTION

Volume VI presents spectrograms of the six velocity measurements from the single film transducers which were located outboard on the wake rake to the left and right of the split film transducers. These plots are similar to those of Volume IV E, being machine plotted spectrograms in the one-third octave band format. They relate directly to the standard spectrograms that appear in Volume VIII for the same set of runs.

The sub-volumes of Volume VI display data derived from the following test runs:

Volume VI-A -	149, 150, 160, 156, 158, 159
Volume VI-B -	111 -119, 121
Volume VI-C -	135, 136, 188, 211, 168, 167, 194, 161, 154, 172, 174, 176, 203, 205, 197

The runs follow the order of the logical arrangement of the Outline of Wake Investigations, Table 1, from which they have been selected. The Table I outline and other material is included for reference and as context to the work of each sub-volume. Table 2, the List of Test Runs, arranges the runs in numerical order and gives pertinent text parameters.

The Index of Rake Positions, Table 3, lists the hot film transducer rake positions in the model coordinate system for each run and its test points. The main feature of Table 3 is the indexing of the test point number to the model water line station and butt line as it varied from run to run. The table groups the runs as they shared the indexing correspondence of point with position. It is emphasized that the runs in a group do not necessarily all share the same number of test points but they do have same correspondence within their respective ranges of test points.

The orientation of the rake is shown pictorially in Figures 1 through 6 for the various test runs. Figure 7 presents a scaled drawing of the model with reference to the three-axis coordinate system. Table 4 lists the center frequency and the upper and lower band limits for each of the numbered one-third octave bands.



TABLE 1

## OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code	Run No.	Base-line
<u>Build-up to Baseline</u>			
1. Nacelles removed	$K_{13}+H_1-N$	149	150
2. Blades off, rotating hub	$K_{13}-M+H_{1.0}$	160	156
3. " " , non-rotating hub	$K_{13}-M+H_{1.0}$	158	156
4. " " , hub off	$K_{13}-M-H_{1.0}$	159	156
<u>Basic Configuration</u>			
<u>1. Wake Explorations near Empennage</u>			
(a) 15" Long. + traverse at T/R C.L.	$K_{11}$	111	---
(b) 9" Vert. + " above T/R "	"	112	---
(c) 2" " " in vortex	"	113	---
(d) 8" " " (continue 112)	"	114	---
(e) 13" " " behind stab.	"	115	---
(f) Lateral traverse, left stab. (One T.P. only)	"	116	---
(g) Same continued	"	117	---
(h) Same continued (One T.P. only)	"	118	---
(i) Lateral traverse right stab.	"	119	---
(j) T/R effect on wake	$K_{11}+T_2^0$	121	115
<u>2. Climb/Descent Studies</u>			
(a) Climb 900 FPM	$K_{11}$	135	---
(b) Descent 800 FPM	"	136	---
<u>Effect Of Hub Caps</u>			
<u>1. Solid Caps on Canister</u>			
(a) 7.6" diam. 2.17" ht. soft Pitch Arms	$K_{11}-H_{1.0}+H_{1.2}$	137	136
(b) 7.6" diam. 2.17" ht. stiff Pitch Arms	$K_{13}+H_{1.2}$	153	156
(b) 7.6" diam. 2.45" ht. flt. test config.	$K_{13}+H_{1.2.1}+I_1$ $+E_{1.0}$	207	188

TABLE 1 (CONTINUED)  
OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code*	Run No.	Base-line
<u>Effect of Hub Caps (Continued)</u>			
2. <u>Solid Caps Raised Above Canister</u>			
(a) 7.6" diam. 2.45" ht. 70" depth, .55 gap	H <sub>1.2.2</sub> +I <sub>1</sub> +E <sub>1.0</sub>	208	188
(b) 10.0" diam. 3.25" ht. 1.55" depth, .50" gap	H <sub>1.8.1</sub> +I <sub>1</sub> +E <sub>1.0</sub>	189	188
(c) 10.0" diam. 4.125" ht. 2.05" depth, .875" gap	H <sub>1.8.2</sub> +I <sub>1</sub> +E <sub>1.0</sub>	190	188
(d) Repeat of 189	" " "	210	188
3. <u>Open Caps Without Underbody</u>			
(a) 10.0" diam. 1.25" gap, blades	H <sub>1.0.2</sub> +I <sub>1</sub> +E <sub>1.0</sub>	193	188/166
(b) " " " gap, no blades	H <sub>1.0.1</sub> -M	166	158
(c) " " 2.05" gap, blades	H <sub>1.14.1</sub> +I <sub>1</sub> +E <sub>1.0</sub>	211	188
(d) " " 1.75" gap, no blades	H <sub>1.0.1</sub> -M	165	158
(e) " " 1.87" gap, blades	H <sub>1.0.3</sub> +I <sub>1</sub> +E <sub>1.0</sub>	191	188
(f) 16" diam. 2.00" gap, blades	H <sub>1.7.1</sub>	168	156/167
(g) " " " gap, no blades	H <sub>1.7.1</sub> -M	167	158
(h) " " 4.00" gap, blades	H <sub>1.7.2</sub>	169	156
4. <u>Open Caps with Underbody</u>			
(a) 7.6" diam. 1.25" gap	H <sub>1.11.1</sub> +I <sub>2</sub> +E <sub>1.0</sub>	194	188
(b) " " " "	H <sub>1.11.1</sub> +I <sub>2</sub> +E <sub>4.0</sub>	198	188
(c) " " " " center post	H <sub>1.11.2</sub> +I <sub>2</sub>	202	194
(d) 10.0" diam. .5" gap, no blades	H <sub>1.5.1</sub> -M	164	158
(e) " " 1.25" gap, no blades	H <sub>1.5.2</sub> -M	161	158
(f) " " 2.0" gap, no blades	H <sub>1.5.4</sub> -M	163	158
(g) " " 4.0" gap, no blades	H <sub>1.5.3</sub> -M	162	158
(h) " " 1.25" gap	H <sub>1.5.2</sub>	154	156/161
*Basic Code is K13.			



TABLE 1 (CONTINUED)

## OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code*	Run No.	Base-line
<u>5. Miscellaneous Hub Covers</u>			
(a) Hub fairing 16" diam.	H <sub>1.3</sub>	151	150
(b) Wham-O-Frisbee 10" diam.	H <sub>1.9.0</sub> +E <sub>1.2</sub>	182	181
(c) Fab. glass Frisbee 16" diam.	H <sub>1.9.1</sub> +E <sub>1.2</sub>	183	181
<u>Effect of Air Ejectors</u>			
1. Basic system no blowing	H <sub>1.0</sub> +E <sub>1.0</sub>	172	156
2. " " 40 psi	" "	173	156/172
3. " " 150 psi	" "	174	156/172
4. Wide chord shroud 40 psi	H <sub>1.0</sub> +E <sub>2.5.1</sub>	175	156/173
5. Wide " " 150 psi	" "	176	156/174
6. W/C shroud w. lip 40 psi	H <sub>1.0</sub> +E <sub>3.5.2</sub>	184	156/173
7. Same Contoured Parallel 150 psi	H <sub>1.0</sub> +E <sub>3.5.4</sub>	187	156/174
8. Bifurcated duct 0 psi	H <sub>1.0</sub> +E <sub>5.0</sub>	203	156
9. " " 40 psi	" "	204	156/203
10. " " 150 psi	" "	205	156/203
<u>Air Ejectors with Open Hub Caps with Underbodies</u>			
1. 7.6" diam. 1.25" gap, 0 psi	H <sub>1.11.1</sub> +I <sub>2</sub> +E <sub>1.0</sub>	194	188/172
2. " " " " 20 psi	" " " "	195	188
3. " " " " 40 psi	" " " "	196	188/173
4. " " " " 150 psi	" " " "	197	188/174
5. " " " " 0 psi	H <sub>1.11.1</sub> +I <sub>2</sub> +E <sub>4.0</sub>	198	188/194
6. " " " " 40 psi	" " " "	199	188/196
7. " " " " 150 psi	" " " "	200	188/196
8. Same with center post	H <sub>1.11.2</sub> +I <sub>2</sub> +E <sub>4.6</sub>	201	188/200
9. 10.0" diam. 2.0" gap wide ch'd. shroud (150 psi)	H <sub>1.5.4</sub> +E <sub>2.5.1</sub>	177	156/176
<u>Effect of Wings and Misc.</u>			
1. Wings			
(a) Nacelle-mounted stub wing	H <sub>1.0</sub> +W <sub>1.0</sub> +E <sub>1.1</sub>	178	181
(b) Single slotted flapped wing	H <sub>1.0</sub> +W <sub>3.0</sub> +E <sub>1.0</sub>	180	181
(c) Double slotted flapped wing	H <sub>1.0</sub> +W <sub>2.0</sub> +E <sub>1.0</sub>	179	181
(d) Boom-mounted stub wing	H <sub>1.0</sub> +W <sub>4.0</sub>	186	156
*Basic Code is K13.			

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TABLE 1 (CONTINUED)

## OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code*	Run No.	Base-line
2. Crown Fairings			
(a) Flat top behind shaft	K <sub>11</sub> +D <sub>1</sub>	140	138
(b) Round top behind shaft	K <sub>11</sub> +D <sub>2</sub>	141	138
(c) Extended flat top fairing	H <sub>1</sub> +D <sub>4</sub>	170	156
(d) Flat top + 16" cap, 4" gap	H <sub>1.7.2</sub> +D <sub>4</sub>	171	170
(e) Forward fairing/nacelle fairing	P <sub>1.0</sub>	152	156
3. Surface Devices			
(a) Vortex generators	K <sub>11</sub> +VG <sub>2.1</sub>	139	138
(b) Guidevane between nacelles	K <sub>11</sub> +FV <sub>1</sub>	142	138
(c) Longitudinal strakes	H <sub>1.5.3</sub> +S <sub>4</sub>	155	156
(d) 14% porosity spoiler	K <sub>11</sub> +X <sub>1</sub>	143	138
*Basic Code is K13 unless noted otherwise.			

TABLE 2  
LIST OF TEST RUNS  
BASIC INVESTIGATIONS OF THE HUB WAKE

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					$\alpha^\circ$	$\psi^\circ$		
111	K <sub>11</sub> /15" Long. wake traverse at TR center line	80	1433/0	8	6.0	-2.0	$\infty$	Off
112	" /9" Vert. wake traverse above TR center line	"	"	"	"	"	"	"
113	" /2" Vert traverse through MR vortex	"	"	"	"	"	"	"
114	" /8" Vert. traverse below TR center line	"	"	"	"	"	"	"
115	" /13" Vert. traverse behind stabilizer	"	"	"	"	"	"	"
116	" /Lateral traverse - left stabilizer	"	"	"	"	"	"	"
117	" /116 continued	"	"	"	"	"	"	"
118	" /116 continued	"	"	"	"	"	"	"
119	" /Lateral traverse - right stabilizer	"	"	"	"	"	"	"
121	K <sub>11</sub> +T <sub>2</sub> /Effect of tail rotor flow on wake	"	1433/4500	"	"	"	"	On
135	K <sub>11</sub> /Wake in 900 fpm climb	"	"	"	-6.0	-4.5	"	Off
136	" /Wake in 800 fpm descent	"	"	"	6.0	+2.0	"	"



TABLE 2 (CONTINUED)  
LIST OF TEST RUNS  
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					$\alpha^\circ$	$\psi^\circ$		
137	K <sub>11</sub> -H <sub>1.0</sub> +H <sub>1.2</sub> /Effect of 7.6 inch diam. solid hub cap	80	1433/0	8	6	-3.8	$\infty$	Off
138	K <sub>11</sub> /Repeat of base run	"	"	"	"	"	"	"
139	K <sub>11</sub> +VG <sub>2.1</sub> /Effect of vortex generators on aft crown	"	"	"	"	"	"	"
140	K <sub>11</sub> +D <sub>1</sub> /Flat-topped "doghouse" fairing on aft crown	"	"	"	"	"	"	"
141	K <sub>11</sub> +D <sub>2</sub> /Rounded-top fairing	"	"	"	"	"	"	"
142	K <sub>11</sub> +FV <sub>1</sub> /Deflection vane on crown between nacelles	"	"	"	"	"	"	"
143	K <sub>11</sub> +X <sub>1</sub> /Variable porosity spoiler	"	"	"	"	"	"	"
149	K <sub>13</sub> +H <sub>1</sub> -N <sub>1</sub> /Effect of nacelles off also add stiff pitch arms (K <sub>13</sub> )	60	1075/0	4.5	"	"	"	"
150	K <sub>13</sub> +H <sub>1</sub> /60 knot baseline	"	"	"	"	"	"	"
151	K <sub>13</sub> +H <sub>1.3</sub> /16 inch diam. helmet fairing	"	"	"	"	"	"	"
152	K <sub>13</sub> +P <sub>1.0</sub> /Pylon and intake fairings	80	1433/0	8	"	"	"	"
153	K <sub>13</sub> +H <sub>1.2</sub> /Repeat 137 with K <sub>13</sub> pitch arms	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)  
LIST OF TEST RUNS  
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					$\alpha^\circ$	$\psi^\circ$		
154	K <sub>13</sub> +H <sub>1.5.2/10</sub> " open hub cap, 7" underbody, 1.25" gap	80	1433/0	8	6	-3.8	$\infty$	Off
155	K <sub>13</sub> +H <sub>1.5.2+S<sub>4</sub></sub> /Same as 154 except strakes on aft crown	"	"	"	"	"	"	"
156	K <sub>13</sub> +H <sub>1.0</sub> /Baseline with K <sub>13</sub> , i.e., stiff pitch arms	"	"	"	"	"	"	"
158	K <sub>13</sub> -M+H <sub>1.0</sub> /Wake studies with blades off, hub not rotating	"	0/0	"	"	"	"	"
159	K <sub>13</sub> -M-H <sub>1.0</sub> /Wake studies with hub off	"	"	"	"	"	"	"
160	K <sub>13</sub> -M+H <sub>1.0</sub> /Same as 158 except hub is rotating	"	1433/0	"	"	"	"	"
161	K <sub>13</sub> -M+H <sub>1.5.2</sub> /Repeat of 154 without blades	"	0/0	"	"	"	"	"
162	K <sub>13</sub> -M+H <sub>1.5.3</sub> /Same as 161 except 4" gap	"	"	"	"	"	"	"
163	K <sub>13</sub> -M+H <sub>1.5.4</sub> /Same as 161 except 2" gap	"	"	"	"	"	"	"
164	K <sub>13</sub> -M+H <sub>1.5.1</sub> /Same as 161 except 0.5" gap	"	"	"	"	"	"	"
165	K <sub>13</sub> -M+H <sub>1.0.1/10</sub> " open hub cap, no underbody, same cap vert. position as Run 154	"	"	"	"	"	"	"
166	K <sub>13</sub> -M+H <sub>1.0.2</sub> /Same as 165 with cap lowered by 0.5"	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)  
LIST OF TEST RUNS  
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					$\alpha^\circ$	$\psi^\circ$		
167	K <sub>13</sub> -M+H <sub>1.7.1</sub> /16" open cap, no underbody, 2" gap	80	0/0	8	6	-3.8	$\infty$	Off
168	K <sub>13</sub> +H <sub>1.7.1</sub> /Blades on, same cap config. as 167	"	1433/0	"	"	"	"	"
169	K <sub>13</sub> +H <sub>1.7.2</sub> /16" open cap, no underbody, 4" gap	"	"	"	"	"	"	"
170	K <sub>13</sub> +H <sub>1.0</sub> +D <sub>4.0</sub> /Extended flat top fairing on aft crown	"	"	"	"	"	"	"
171	K <sub>13</sub> +H <sub>1.7.2</sub> +D <sub>4.0</sub> /Same fairing as 170, same cap as 169	"	"	"	"	"	"	"
172	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>1.0</sub> (0psi)/Basic air ejector zero blowing baseline	"	"	"	"	"	"	"
173	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>1.0</sub> (40 psi)/Same as 172 with 40 psi supply	"	"	"	"	"	"	"
174	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>1.0</sub> (150 psi)/Same as 172 with 150 psi supply	"	"	"	"	"	"	"
175	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>2.5.1</sub> (40 psi)/Ejector with wide chord shroud at 40 psi	"	"	"	"	"	"	"
176	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>2.5.1</sub> (150 psi)/Same as 174 with 150 psi supply	"	"	"	"	"	"	"
177	K <sub>13</sub> +H <sub>1.5.4</sub> +E <sub>2.5.1</sub> (150 psi)/Same as 176 with 10" cap like 163	"	"	"	"	"	"	"
178	K <sub>13</sub> +H <sub>1.0</sub> +W <sub>1.0</sub> +E <sub>1.1</sub> (0 psi)/Nacelle mounted wing	"	"	"	"	"	"	"



TABLE 2 (CONTINUED)  
LIST OF TEST RUNS  
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT.	TAIL ROTOR
					$\alpha^\circ$	$\psi^\circ$		
179	K <sub>13</sub> +H <sub>1.0</sub> +W <sub>2.0</sub> +E <sub>1.0</sub> (0 psi)/Double slotted flapped wing	80	1433/0	8	6	-3.8	$\infty$	Off
180	K <sub>13</sub> +H <sub>1.0</sub> +W <sub>3.0</sub> +E <sub>1.0</sub> (0 psi)/Single slotted flapped wing	"	"	"	"	"	"	"
181	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>1.2</sub> (0 psi)/Baseline with ejector tube moved aft	"	"	"	"	"	"	"
182	K <sub>13</sub> +H <sub>1.9.0</sub> +E <sub>1.2</sub> (0 psi)/Standard 10" frisbee	"	"	"	"	"	"	"
183	K <sub>13</sub> +H <sub>1.9.1</sub> +E <sub>1.2</sub> (0 psi)/16" fabricated frisbee	"	"	"	"	"	"	"
184	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>3.5.2</sub> (40 psi)/Wide chord with lip at 40 psi	"	"	"	"	"	"	"
185	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>3.5.2</sub> (150 psi)/Same as 184 with 150 psi air	"	"	"	"	"	"	"
186	K <sub>13</sub> +H <sub>1.0</sub> +W <sub>4.0</sub> /Boom mounted stub wing	"	"	"	"	"	"	"
187	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>3.5.4</sub> (150 psi)/Like 185 with modified shroud	"	"	"	"	"	"	"
188	K <sub>13</sub> +H <sub>1.0</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/Baseline with I <sub>1</sub> instr. ring	"	"	"	"	"	"	"
189	K <sub>13</sub> +H <sub>1.8.1</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/Solid cap, 10" diam. 3.25" height	"	"	"	"	"	"	"
190	K <sub>13</sub> +H <sub>1.8.2</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/Same as 190 except + 4.12" height	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)  
LIST OF TEST RUNS  
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					$\alpha^\circ$	$\psi^\circ$		
191	K13+H1.0.2+I1+E1.0 (0 psi)/10" cap, no underbody, 1.87" gap	80	1433/0	8	6	-3.8	$\infty$	Off
193	K13+H1.0.2+I1+E1.0 (0 psi)/10" cap, no underbody, 1.25" gap	"	"	"	"	"	"	"
194	K13+H1.11.1+I2+E1.0 (0 psi)/7.6" cap, underbody, 1.25" gap	"	"	"	"	"	"	"
195	K13+H1.11.1+I2+E1.0 (20 psi)/Same as 194 with 20 psi air	"	"	"	"	"	"	"
196	K13+H1.11.1+I2+E1.0 (40 psi)/Same as 194 with 40 psi air	"	"	"	"	"	"	"
197	K13+H1.11.1+I2+E1.0 (150 psi)/Same as 194 with 150 psi air	"	"	"	"	"	"	"
198	K13+H1.11.1+I2+E4.0 (0 psi)/Same as 194 except blowing tube 2" aft	"	"	"	"	"	"	"
199	K13+H1.11.1+I2+E4.0 (40 psi)/Same as 198 with 40 psi air	"	"	"	"	"	"	"
200	K13+H1.11.1+I2+E4.0 (150 psi)/Same as 198 with 150 psi air	"	"	"	"	"	"	"
201	K13+H1.11.2+I2+E4.0 (150 psi)/Same as 200 except center support cap	"	"	"	"	"	"	"
202	K13+H1.11.2+I2/Baseline with I2 and no blowing tube	"	"	"	"	"	"	"
203	K13+H1.0+E5.0 (0 psi)/Bifurcated air duct baseline	"	"	"	"	"	"	"



TABLE 2 (CONTINUED)  
LIST OF TEST RUNS  
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL. ROTOR
					$\alpha^\circ$	$\psi^\circ$		
204	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>5.0</sub> (150 psi)/Bifurcated duct with 150 psi air	80	1433/0	8	6	-3.8	$\infty$	Off
205	K <sub>13</sub> +H <sub>1.0</sub> +E <sub>5.0</sub> (40 psi)/Same as 204 with 40 psi air	"	"	"	"	"	"	"
207	K <sub>13</sub> +H <sub>1.2.1</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/7.6" solid cap, no gap	"	"	"	"	"	"	"
208	K <sub>13</sub> +H <sub>1.2.2</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/Same as 207 except 0.55" gap	"	"	"	"	"	"	"
210	K <sub>13</sub> +H <sub>1.15.1</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/Repeat of 189	"	"	"	"	"	"	"
211	K <sub>13</sub> +H <sub>1.14.1</sub> +I <sub>1</sub> +E <sub>1.0</sub> (0 psi)/Like 189 and 210 except cap is open	"	"	"	"	"	"	"

**TABLE 3**  
**INDEX TO RAKE POSITIONS**

<b>RUN NUMBER</b>	<b>TEST POINT</b>	<b>WATER LINE</b>	<b>MODEL STATION</b>	<b>BUTT LINE</b>	<b>LOCATION FIGURE</b>
111	20	53.5	103.1	-7.25	1
	21	"	"	"	
	22	"	105.0	"	
	24	"	107.0	"	
	26	"	109.0	"	
	28	"	111.0	"	
	30	"	112.9	"	
	32	"	114.9	"	
	34	"	116.9	"	
	36	"	118.9	"	
112	2	48.9	107.3	-7.25	1
	4	50.8	"	"	
	6	52.7	103.3	"	
	8	54.5	"	"	
	10	56.2	"	"	
	12	57.2	"	"	
113	2	51.7	103.3	-3.25	1
	4	52.3	"	"	
	6	52.8	"	"	
	8	53.3	"	"	
	10	53.9	"	"	
	11	53.3	"	"	
114	2	44.5	103.0	-3.25	1
	4	46.4	"	"	
	6	48.2	"	"	
	8	50.0	"	"	
	10	51.9	"	"	
115	3	52.9	124.7	-3.25	1
	4	52.0	"	"	
	6	50.0	"	"	
	9	48.0	"	"	
	10	46.0	"	"	
	12	44.1	"	"	
	14	42.1	"	"	
	16	53.0	"	"	
	18	54.0	"	"	
	20	55.0	"	"	

**TABLE 3 (CONTINUED)**  
**INDEX TO RAKE POSITIONS**

<b>RUN NUMBER</b>	<b>TEST POINT</b>	<b>WATER LINE</b>	<b>MODEL STATION</b>	<b>BUTT LINE</b>	<b>LOCATION FIGURE</b>
116	7	36.9	100.5	-17.5	1
117	2 4 6 8 10	37.6 " 37.3 " "	100.5 " 99.6 " "	-16.0 -14.0 -12.0 -10.0 - 8.0	1
118	2	37.6	100.5	- 6.0	1
119	2 5 8 9 14 16 20 25	37.3 " " " " " 51.5 52.3	99.6 " " " " " 102.5 101.7	+ 6.0 8 10 " 14 16 17.5 -17.5	1
121	3 4 6 8 10	62.9 53.5 50.1 46.0 42.1	129.0 " " " "	+ 5.7 " " " "	2
135	2 4 6 8 10 12 14	56.9 54.5 52.5 50.5 48.5 46.5 44.5	106.3 " " " " " "	- 5.7 " " " " " "	3
136	2 4 6 8 10 12 14 17 18 19	56.5 54.5 52.5 50.6 48.5 46.5 44.5 37.1 39.0 41.0	104.0 " " " " " " " " "	- 8.0 " " " " " " " " "	4



TABLE 3 (CONTINUED)  
INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
137	3	38.7	98.4	- 8.0	5
	5	39.9	"	"	
	7	42.0	100.5	"	
	9	44.0	"	"	
	11	46.0	103.6	"	
	13	48.0	"	"	
	15	50.0	"	"	
	17	52.0	"	"	
	19	54.0	"	"	
138-41, 143	2	38.8	98.4	- 8.0	5
	3	40.0	"	"	
	4	42.0	100.5	"	
	5	44.0	"	"	
	6	46.0	103.6	"	
	7	48.0	"	"	
	8	50.0	"	"	
	9	52.0	"	"	
	10	54.0	"	"	
142	7	37.8	98.4	- 8.0	5
	8	"	"	"	
	9	40.2	"	"	
	10	42.0	100.5	"	
	11	44.0	"	"	
	12	46.0	103.6	"	
	13	48.0	"	"	
	14	50.0	"	"	
	15	52.0	"	"	
	16	54.0	"	"	
	17	56.8	"	"	

TABLE 3 (CONTINUED)  
INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
149-151	2	38.8	98.5	- 8.0	5
	3	40.0	"	"	
	4	42.0	100.6	"	
	5	44.0	"	"	
	6	46.0	103.5	"	
	7	48.0	"	"	
	8	50.0	"	"	
	9	52.0	"	"	
	10	54.0	"	"	
152-6, 158	2	42.9	97.9	0.0	6
161-4, 166	3	44.9	"	"	
167, 169-71	4	46.9	100.6	"	
175, 177-9	5	48.9	"	"	
180, 182, 184	6	50.9	104.6	"	
186-8, 190	7	52.9	"	"	
191, 193, 194	8	54.9	"	"	
196, 198, 201	9	56.9	"	"	
204, 207, 208					
211					
159	1	54.9	104.6	0.0	6
	2	52.9	"	"	
	3	50.7	"	"	
	4	48.6	100.6	"	
	5	46.7	"	"	
160, 203	5	42.9	97.9	0.0	6
	6	44.9	"	"	
	7	46.9	100.6	"	
	8	48.9	"	"	
	9	50.9	104.6	"	
	10	52.9	"	"	
	11	54.9	"	"	
165	3	44.9	97.9	0.0	6
	4	42.9	"	"	
	5	46.9	100.6	"	
	6	48.9	"	"	
	7	50.9	104.6	"	
	8	52.9	"	"	

**TABLE 3 (CONTINUED)**  
**INDEX TO RAKE POSITIONS**

<b>RUN NUMBER</b>	<b>TEST POINT</b>	<b>WATER LINE</b>	<b>MODEL STATION</b>	<b>BUTT LINE</b>	<b>LOCATION FIGURE</b>
168, 183	4	42.9	97.9	0.0	6
	5	44.9	"	"	
	6	46.9	100.6	"	
	7	48.9	"	"	
	8	50.9	104.6	"	
	9	52.9	"	"	
	10	54.9	"	"	
172	3	42.9	97.9	0.0	6
	4	44.9	"	"	
	6	44.9	"	"	
	7	46.9	100.6	"	
	8	48.9	"	"	
	9	50.9	104.6	"	
	10	52.9	"	"	
173, 174, 176 185, 195, 197 199, 200, 205 210	11	54.9	"	"	
	1	42.9	97.9	0.0	6
	2	44.9	"	"	
	3	46.9	100.6	"	
	4	48.9	"	"	
	5	50.9	104.6	"	
	6	52.9	"	"	
181	7	54.9	"	"	
	2	42.9	97.9	0.0	6
	3	44.9	"	"	
	4	46.9	100.6	"	
	5	48.9	"	"	
	6	50.9	104.6	"	
	7	52.9	"	"	
	9	54.9	"	"	
	10	"	"	"	
	11	"	"	"	
	12	"	"	"	
	13	42.9	97.9	"	



TABLE 3 (CONTINUED)

INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
189	29	42.9	97.9	0.0	6
	30	44.9	"	"	
	31	46.9	100.6	"	
	32	48.9	"	"	
	33	"	"	"	
	34	50.9	104.6	"	
	35	"	"	"	
	36	48.9	100.6	"	
	37	50.9	104.6	"	
	38	52.9	"	"	
	39	54.9	"	"	
202	3	43.4	97.9	0.0	6
	4	44.9	"	"	
	5	46.9	100.6	"	
	6	48.9	"	"	
	7	50.9	104.6	"	

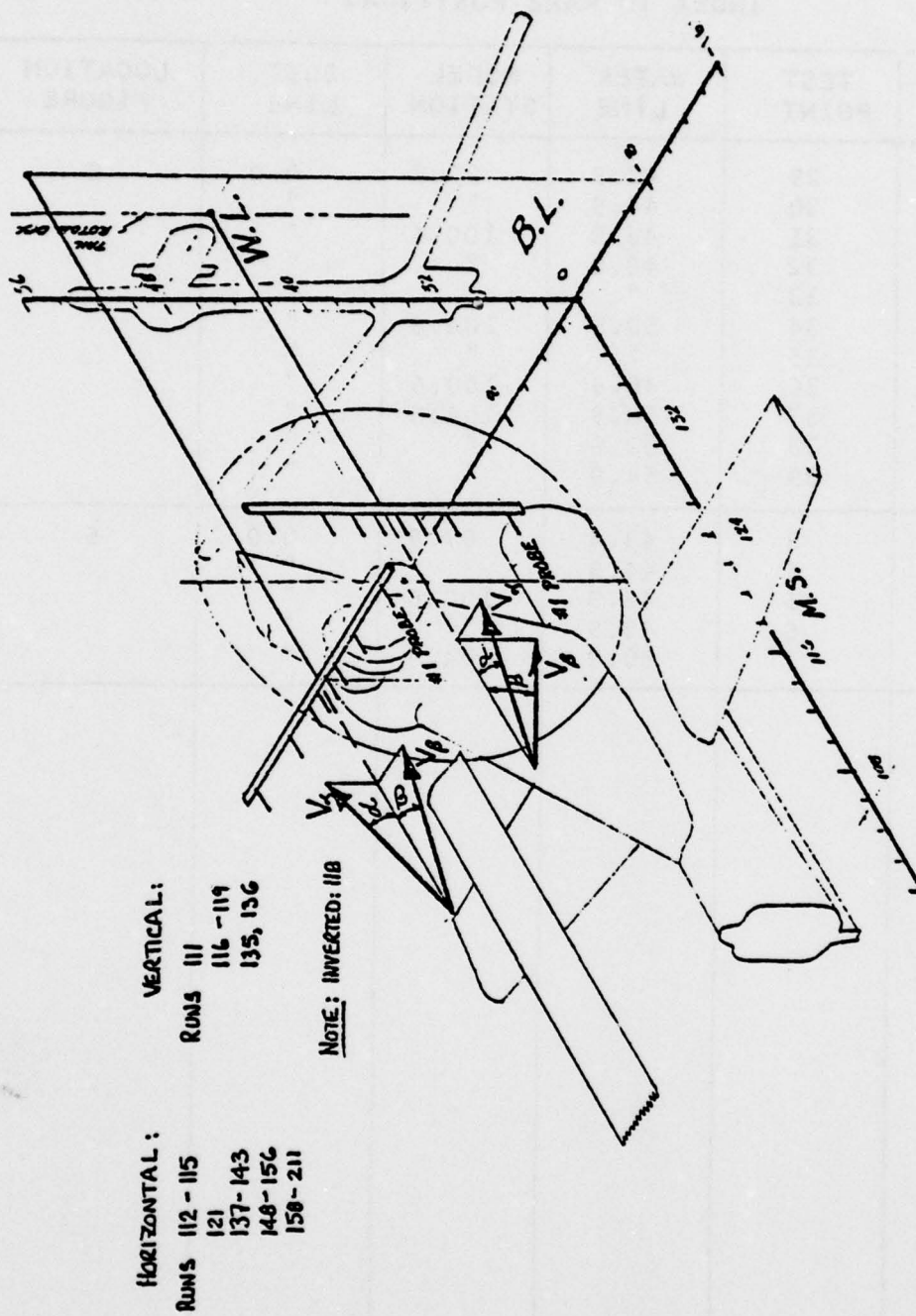


FIGURE 1 - RAKE ORIENTATION DIAGRAM



RUN 121

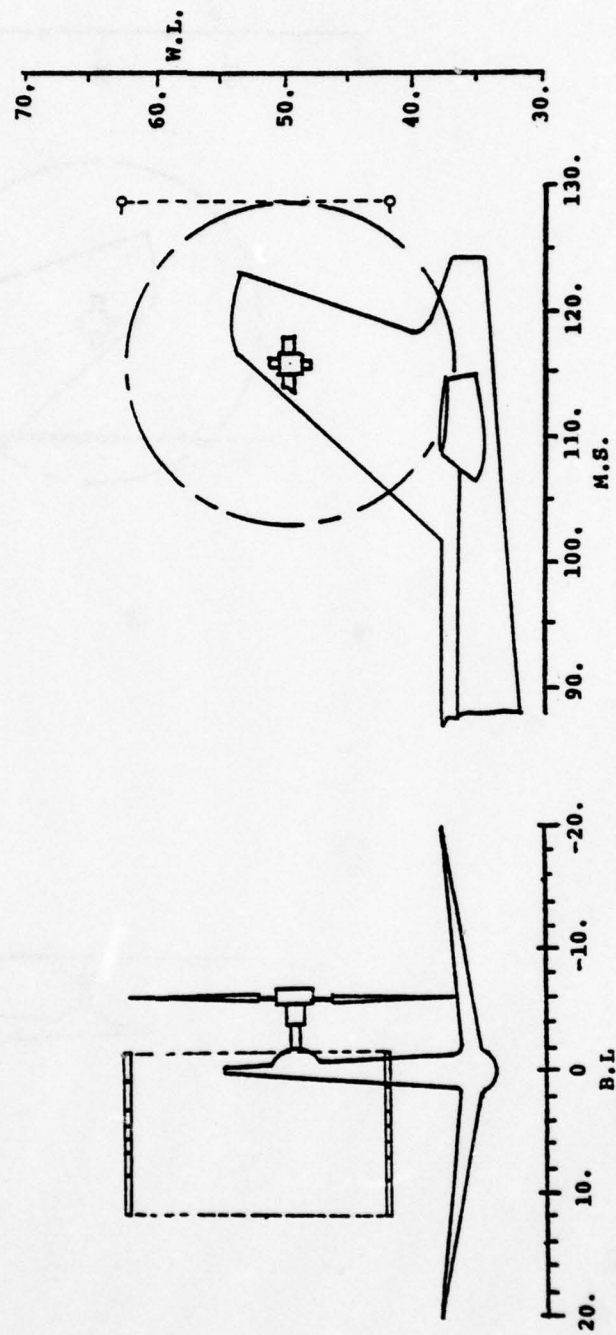


FIGURE 2 -HOT FILM RAKE LOCATIONS

RUN 135

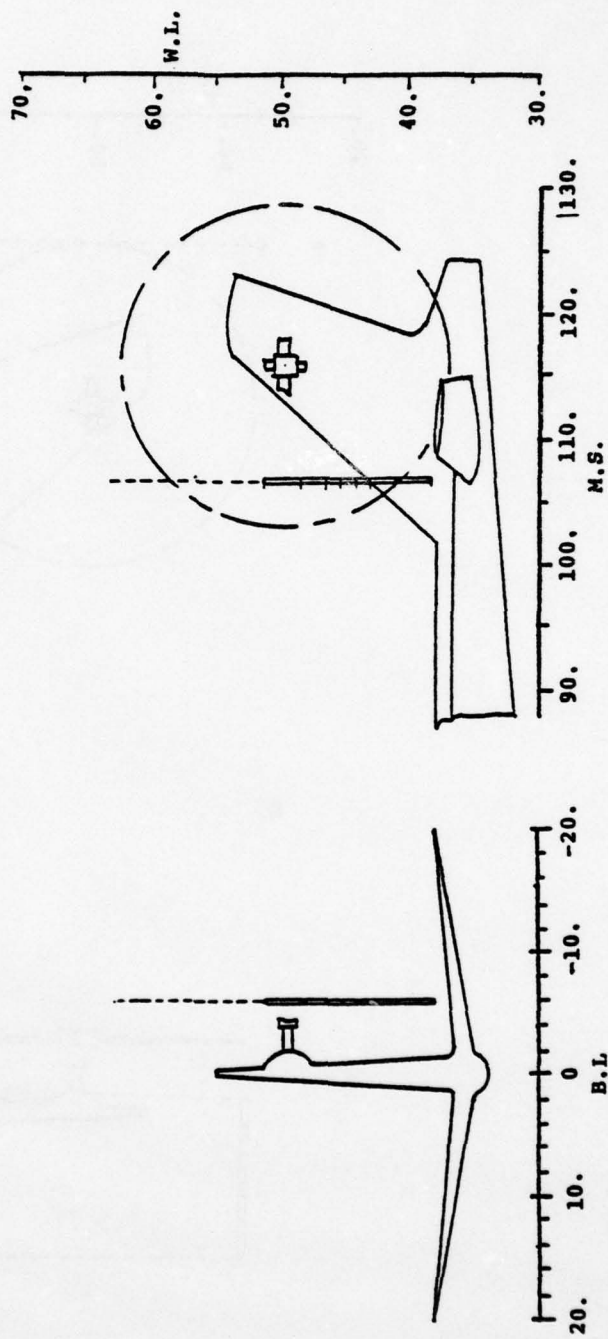


FIGURE 3 -HOT FILM RAKE LOCATIONS

RUN 136

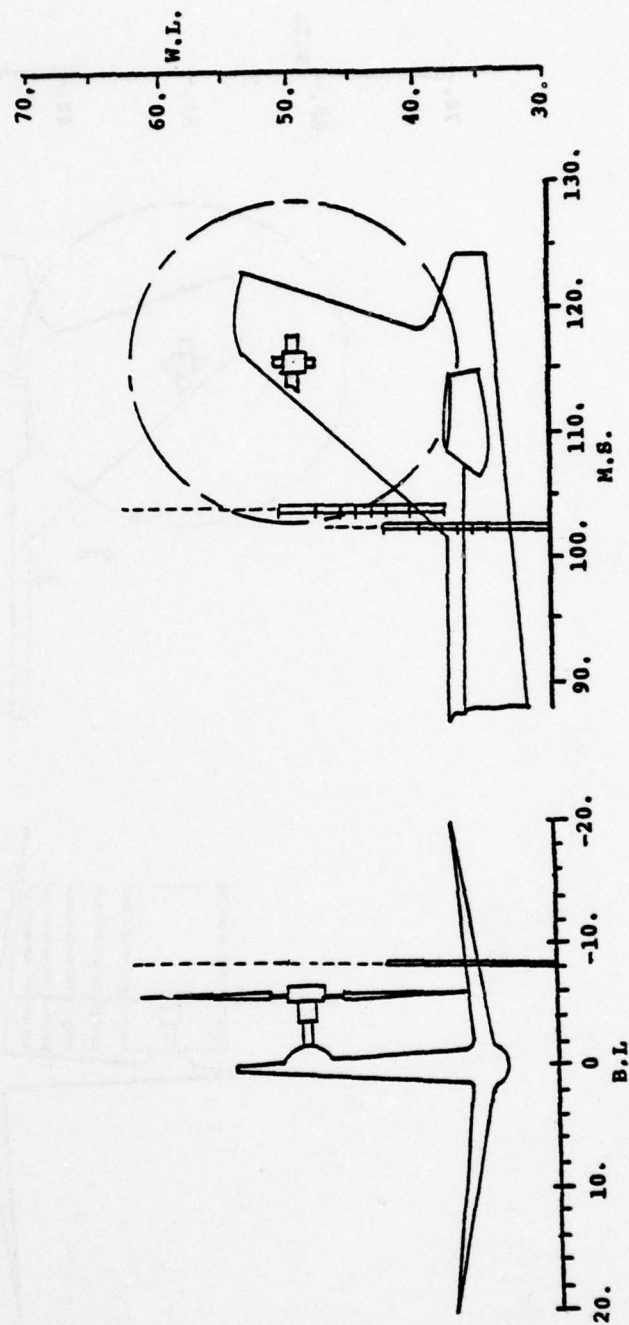


FIGURE 4 -HOT FILM RAKE LOCATIONS

RUN 137, 138, 139, 140, 141, 142,  
143, 148, 149, 150, 151

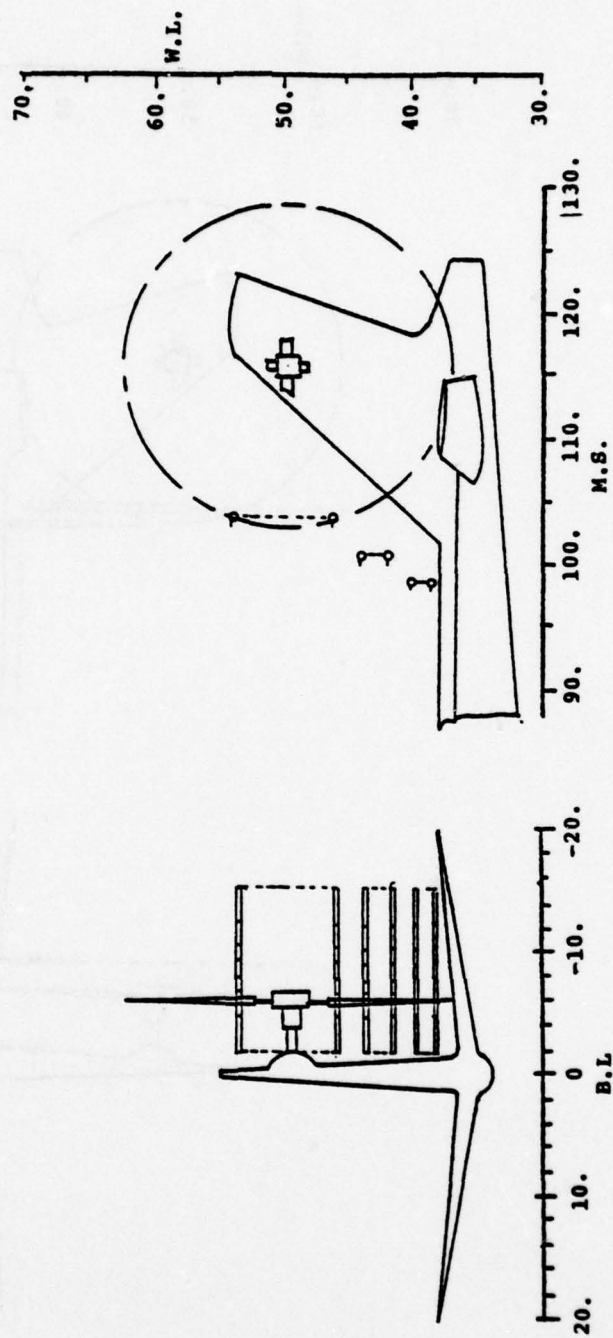


FIGURE 5 -HOT FILM RAKE LOCATIONS



RUN 152-156, 158-211

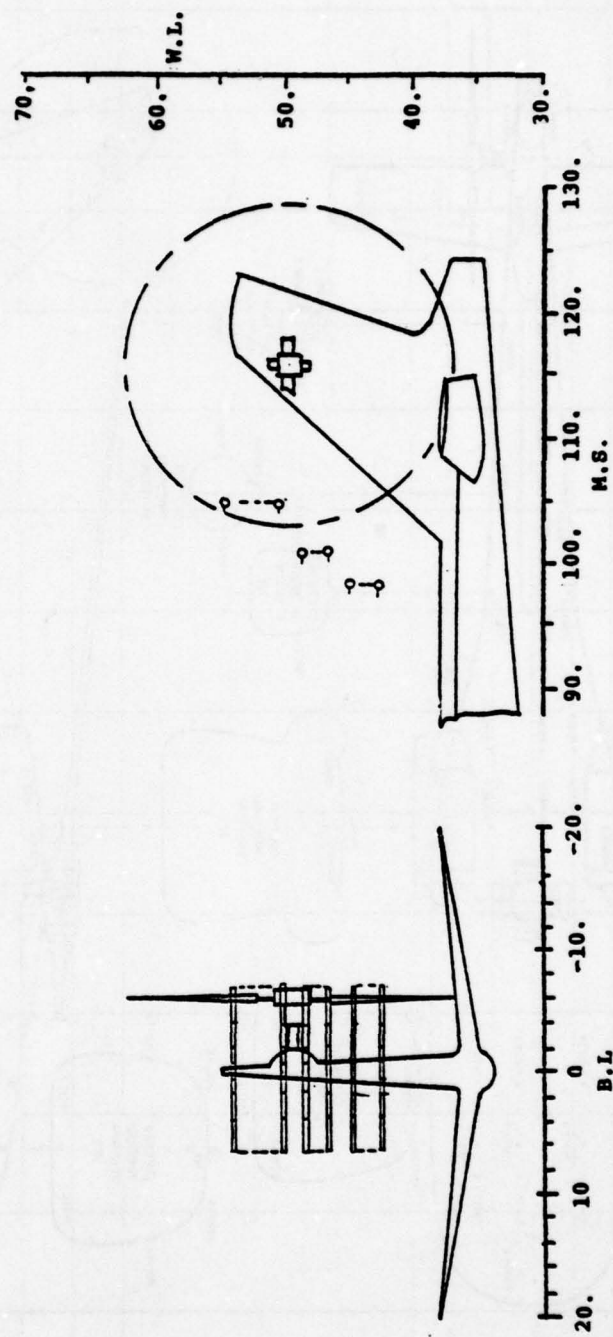


FIGURE 6 -HOT FILM RAKE LOCATIONS

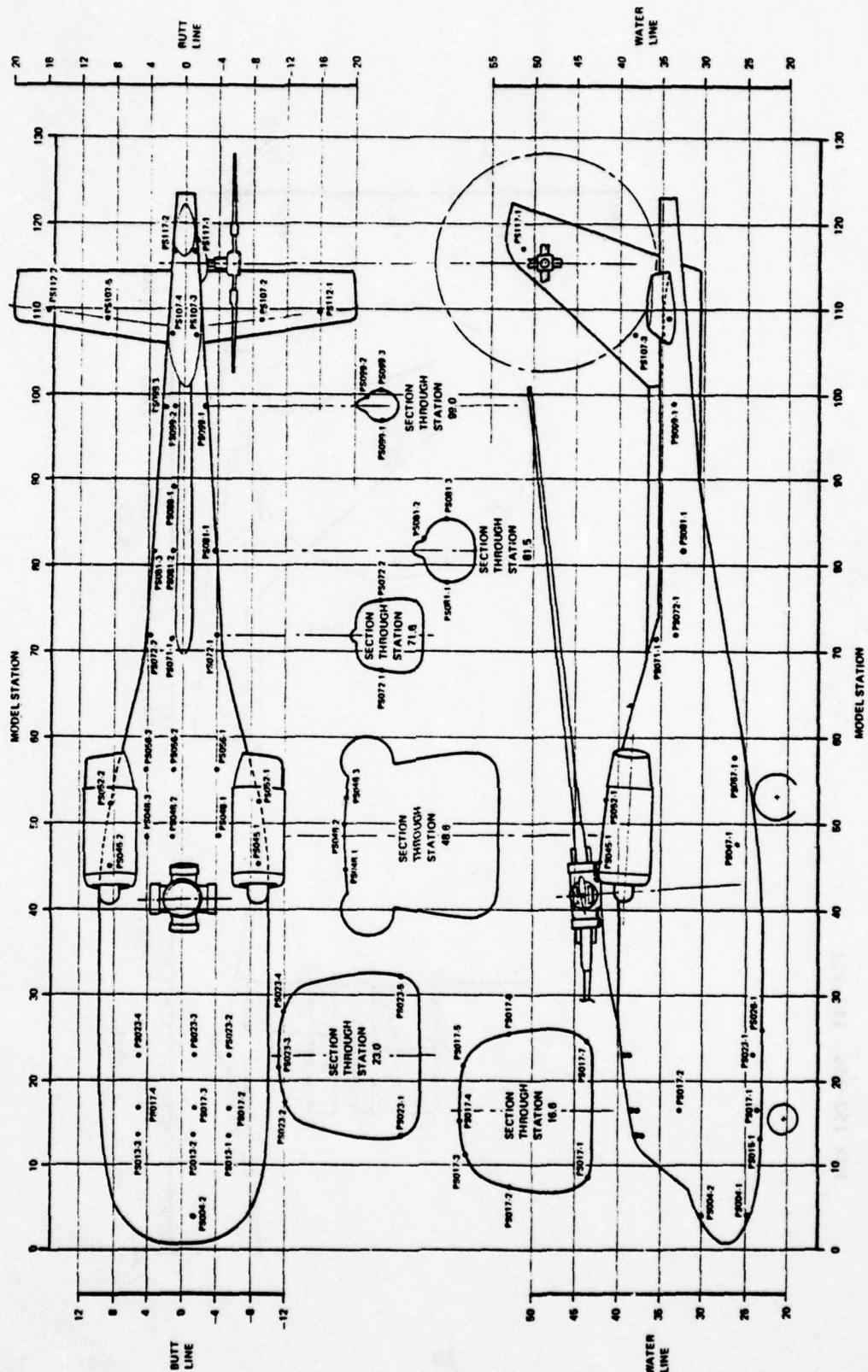


FIGURE 7 -1/4.85 SCALE MODEL GEOMETRY AND SURFACE PRESSURE TRANSDUCER LOCATIONS

TABLE 4  
1/3 OCTAVE BAND IDENTIFICATION

BAND NUMBER	BAND WIDTH - Hz		
	MINIMUM	CENTER	MAXIMUM
0	3.5	3.4	4.4
1	4.4	4.9	5.5
2	5.5	6.2	7.0
3	7.0	7.8	8.7
4	8.7	9.8	11.0
5	11.0	12.4	13.9
6	13.4	15.6	17.5
7	17.5	19.7	22.1
8	22.1	24.8	27.8
9	27.8	31.25	35.1
10	35.1	39.4	44.2
11	44.2	49.6	55.7
12	55.7	62.5	70.2
13	70.2	78.7	88.9
14	88.9	99.2	111.4
15	111.4	125.0	140.3
16	140.3	157.5	176.8
17	176.8	198.4	222.7
18	222.7	250.0	280.6



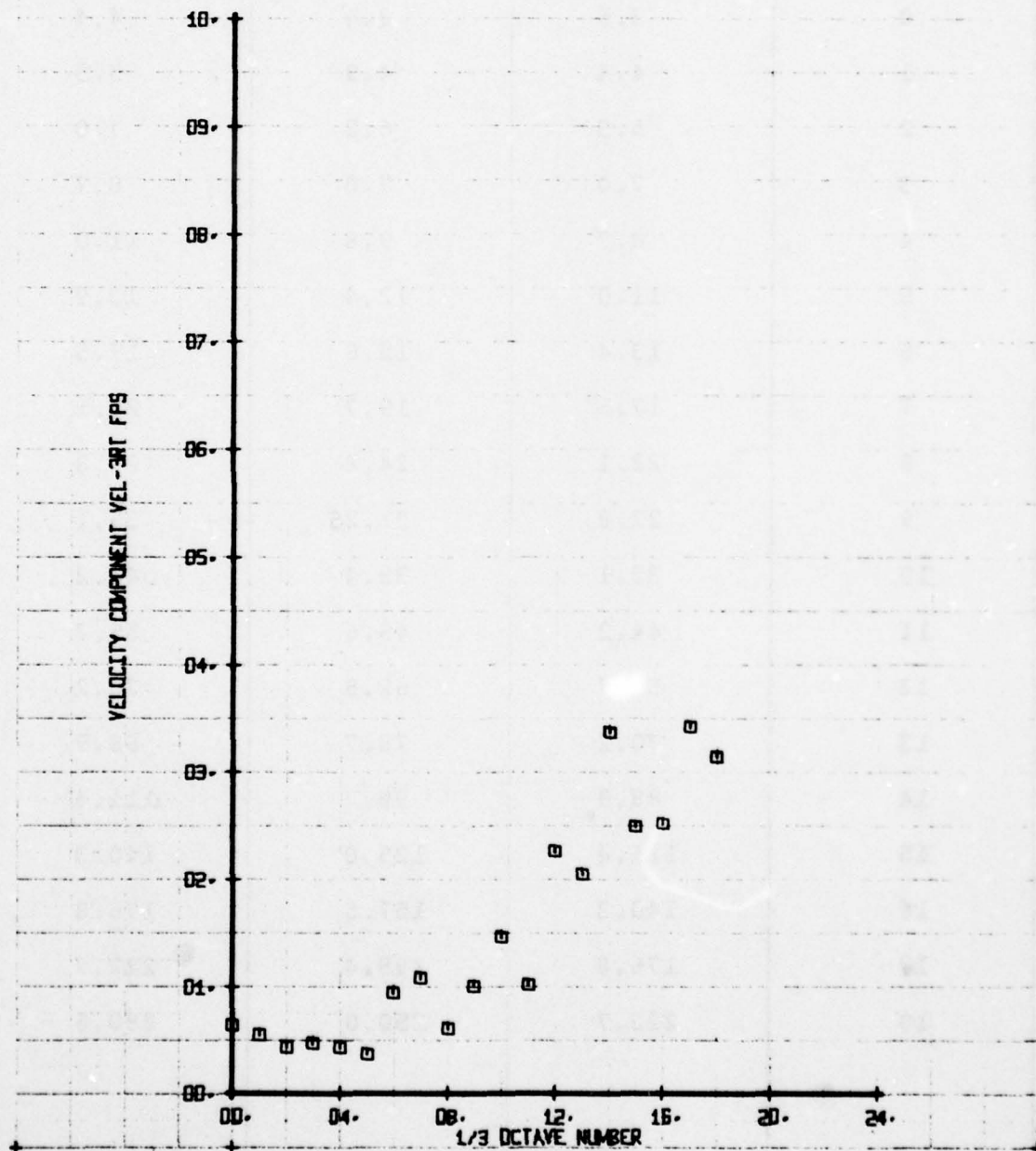
HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 FPM CLIMB

RUN 135 TP 2

LEGEND

SYM	CH	PARAMETER
□	71	VEL-3RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 FPM CLIMB

RUN 135 TP 4

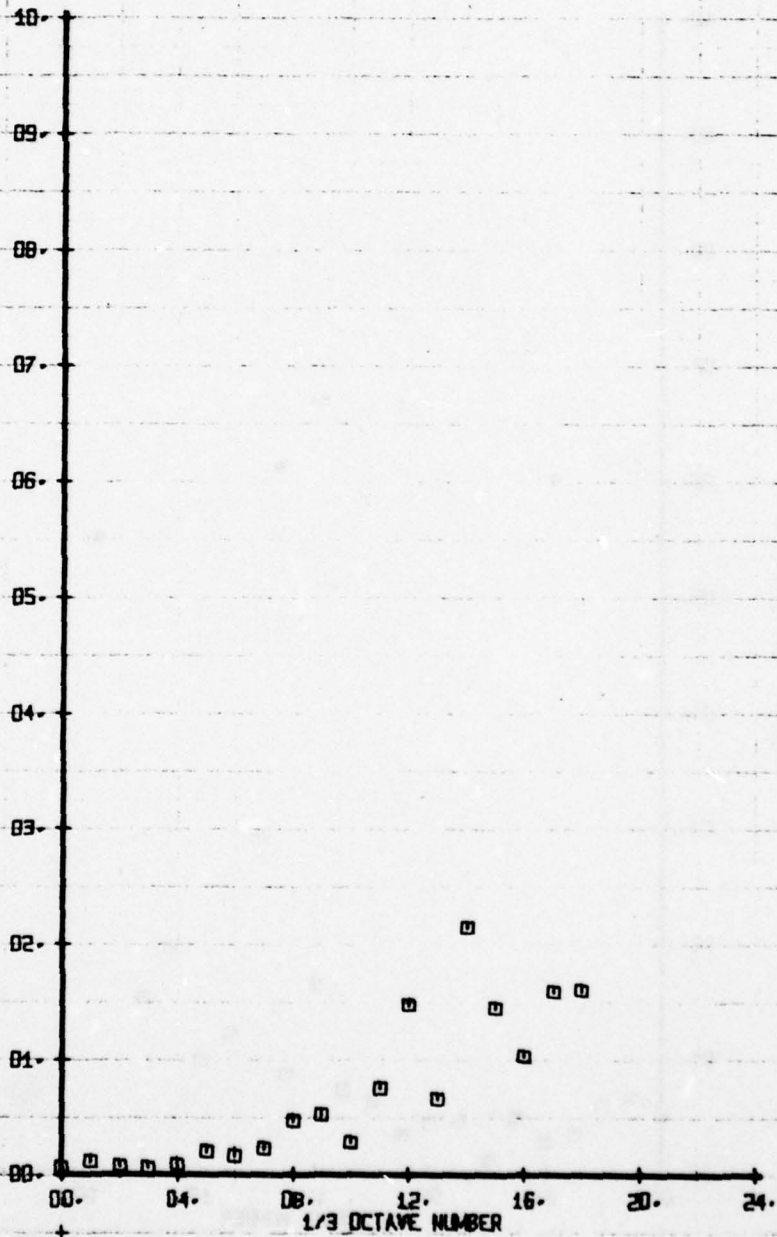
SYM  
□

CH  
71

LEGEND

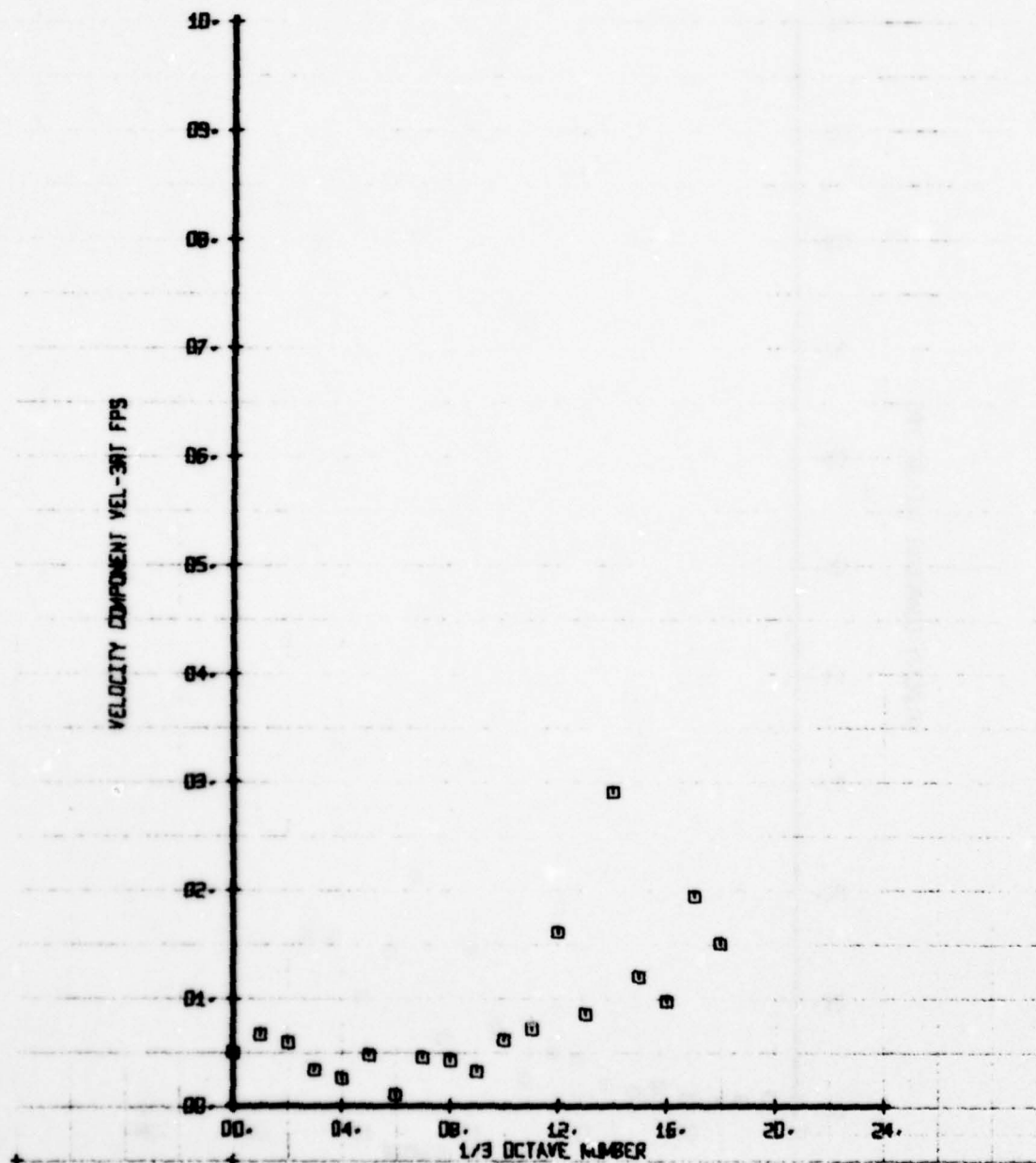
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 6

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



# HOT FILM WAVE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 RPM CLIMB

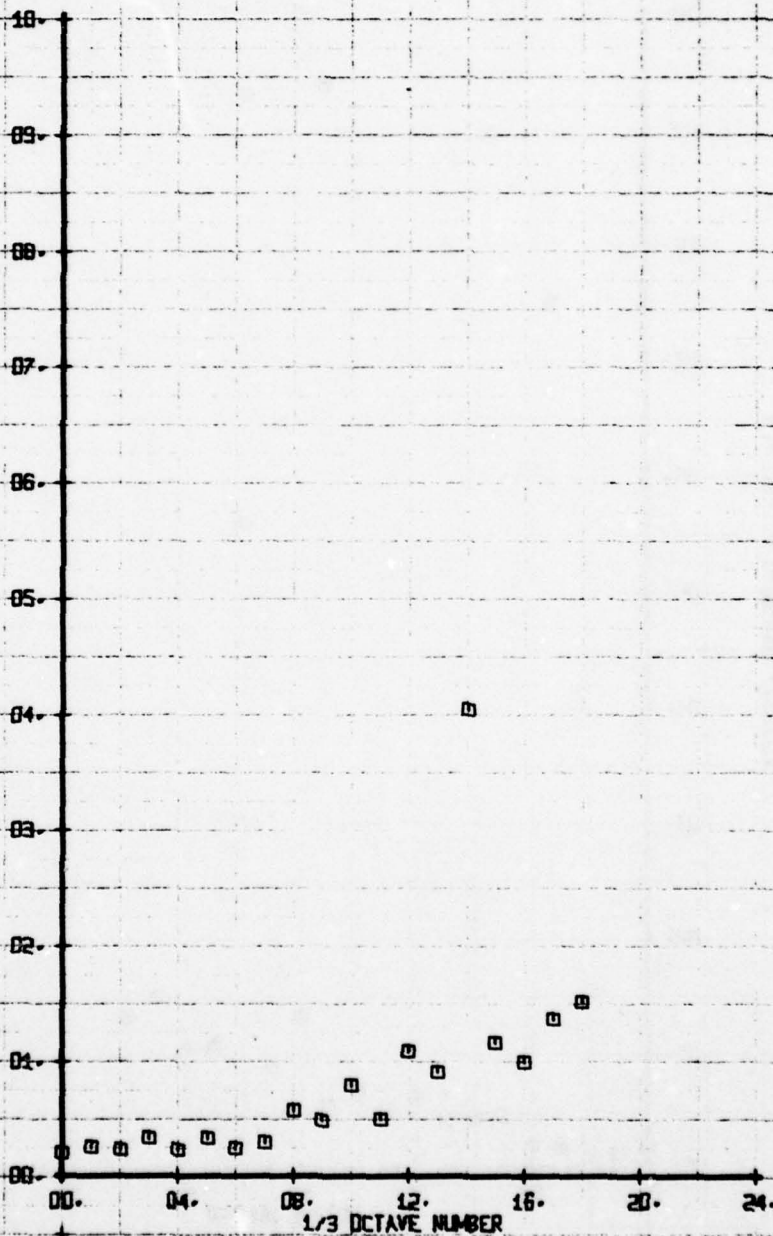
RUN 135 TP B

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

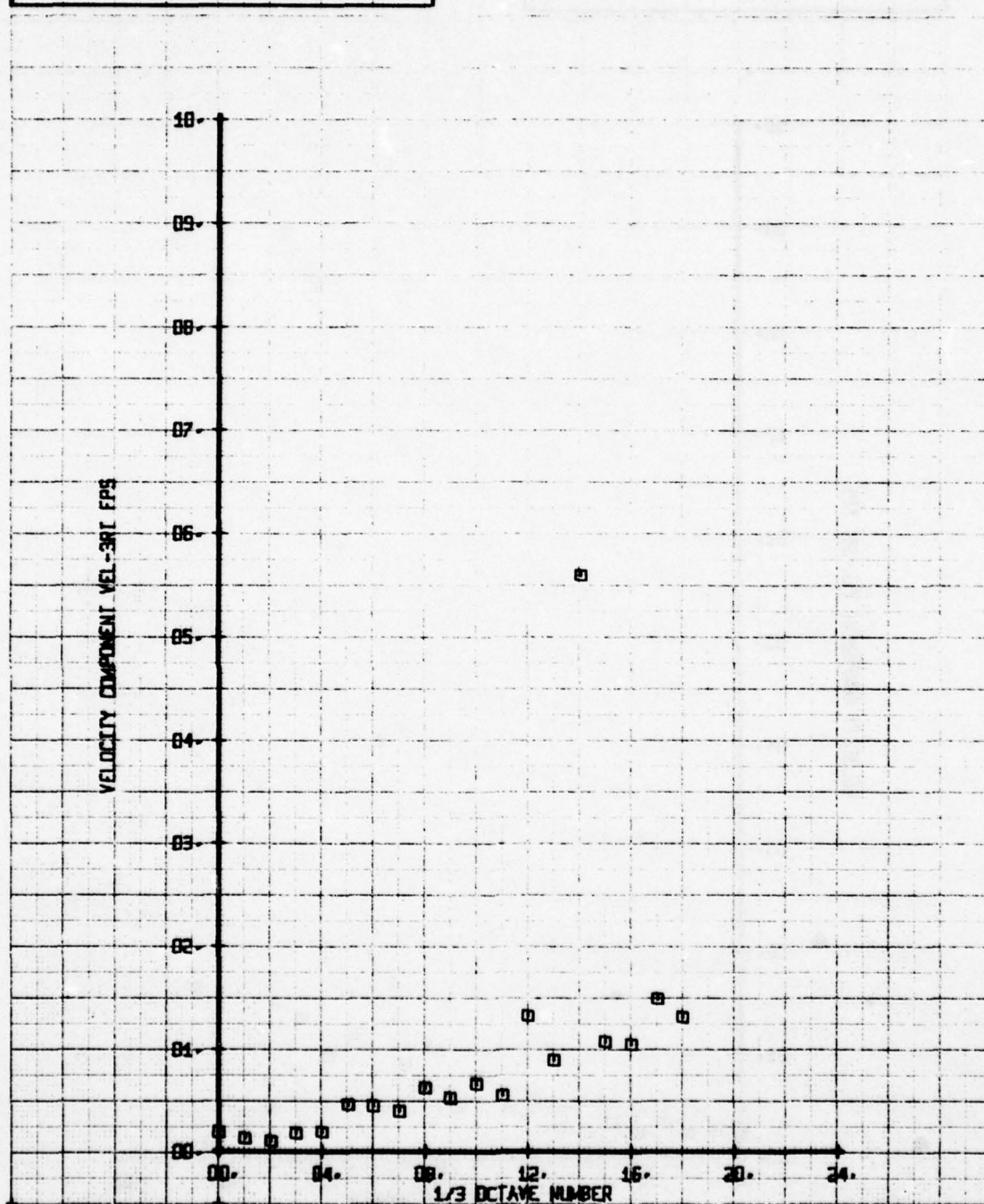
VELOCITY COMPONENT VEL-3RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 10

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



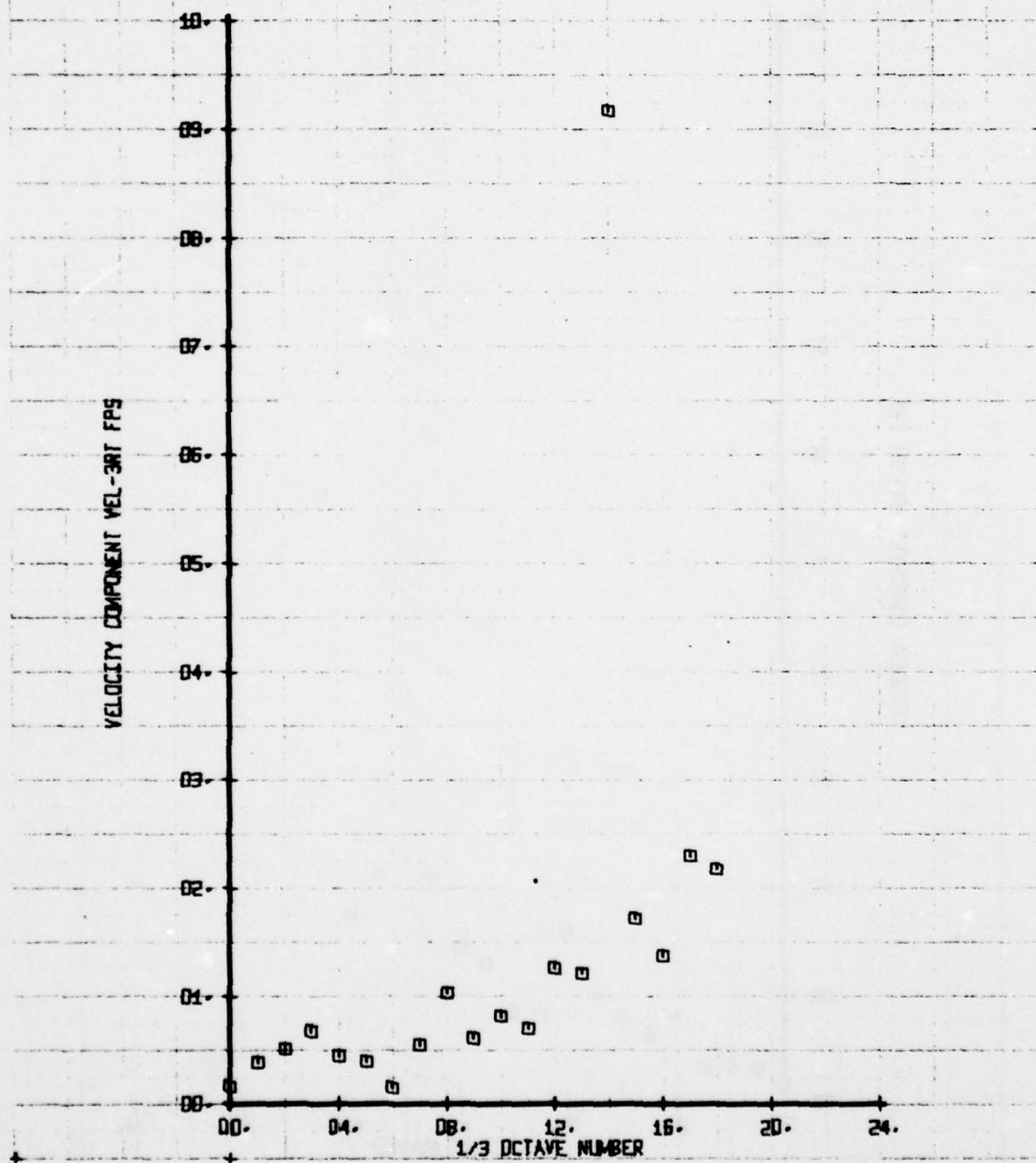
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 12

SYM  
□

CH  
71

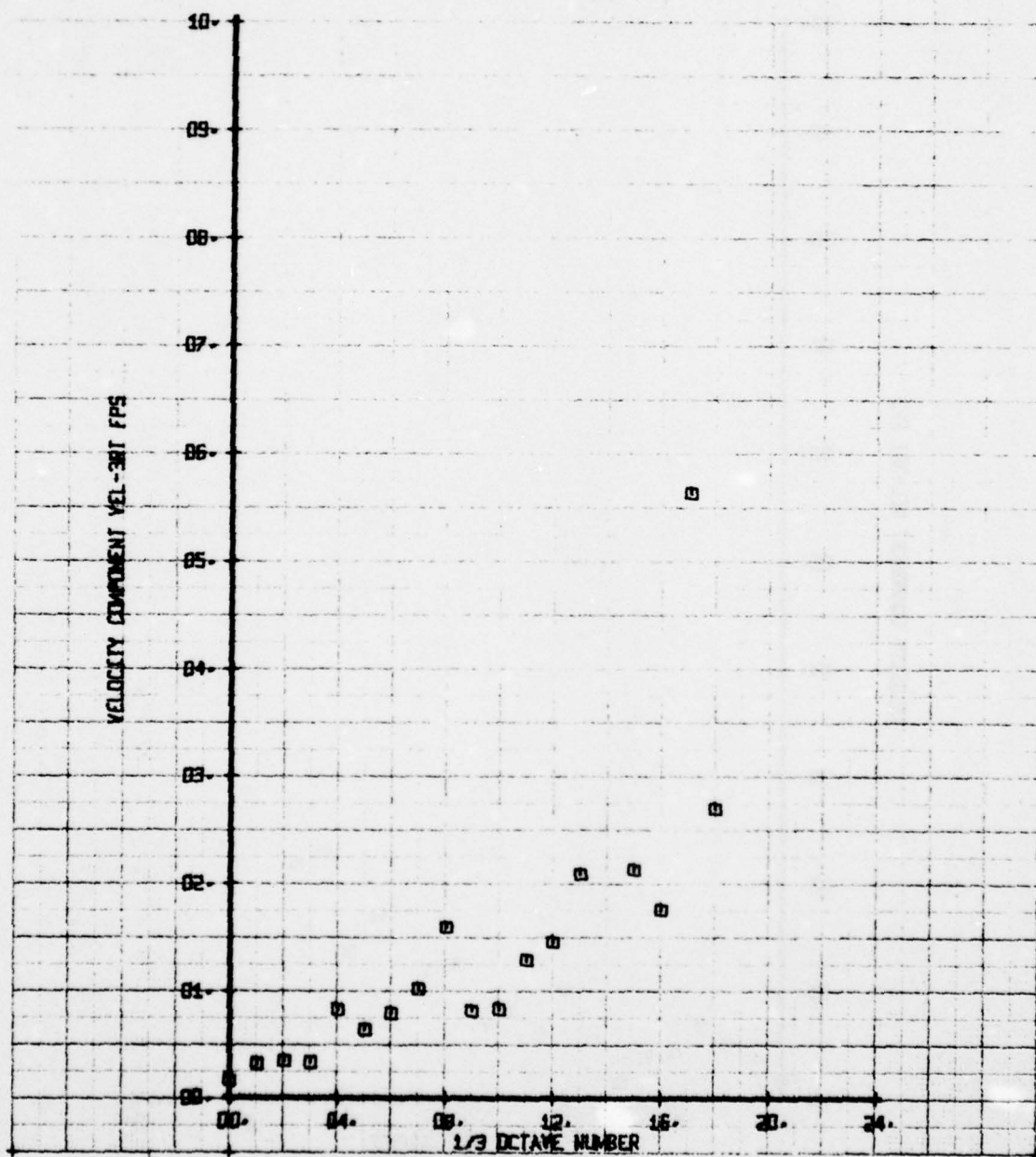
LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 14

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 FPM CLIMB

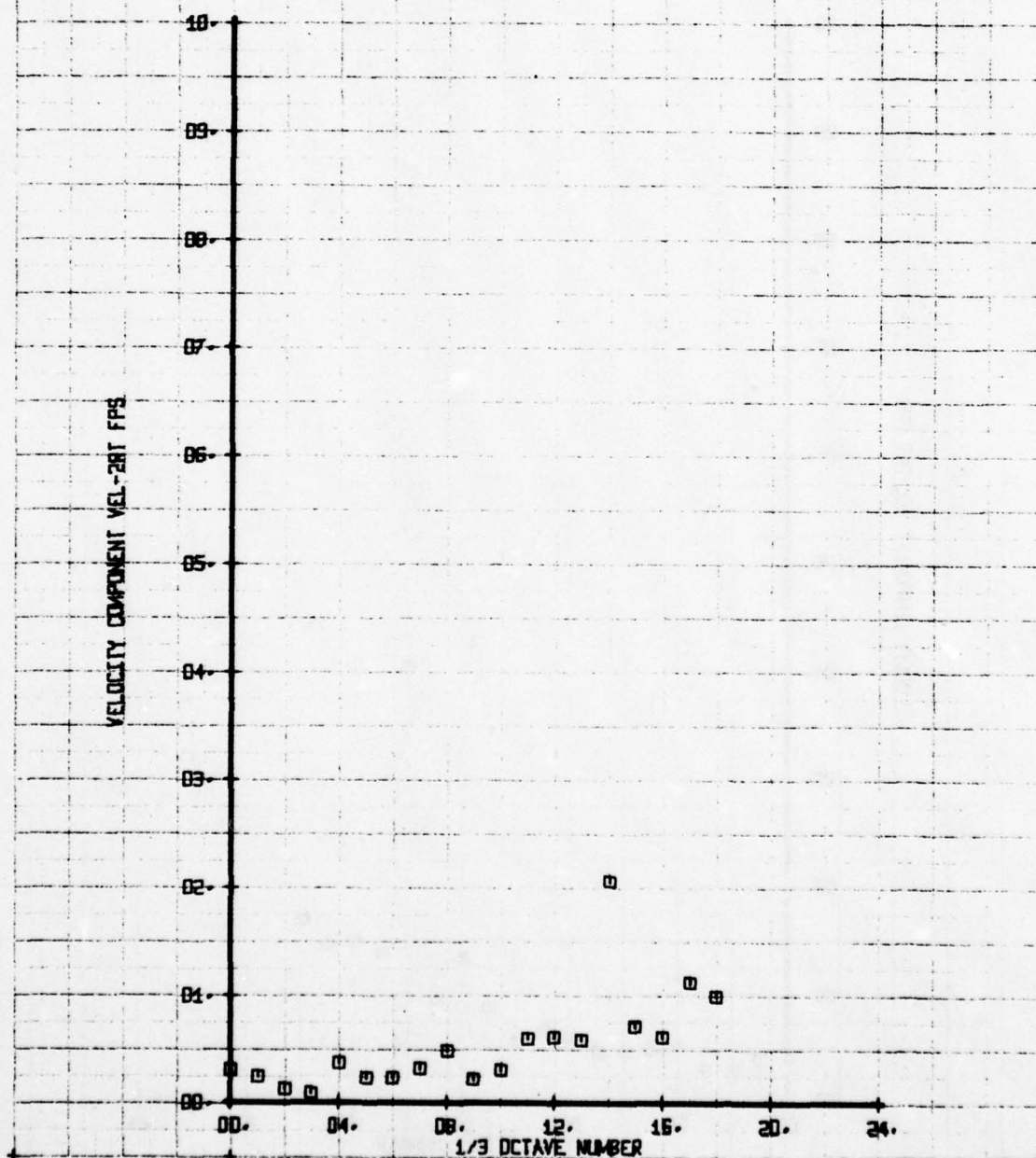
RUN 135 TP 2

SYM  
□

CH  
75

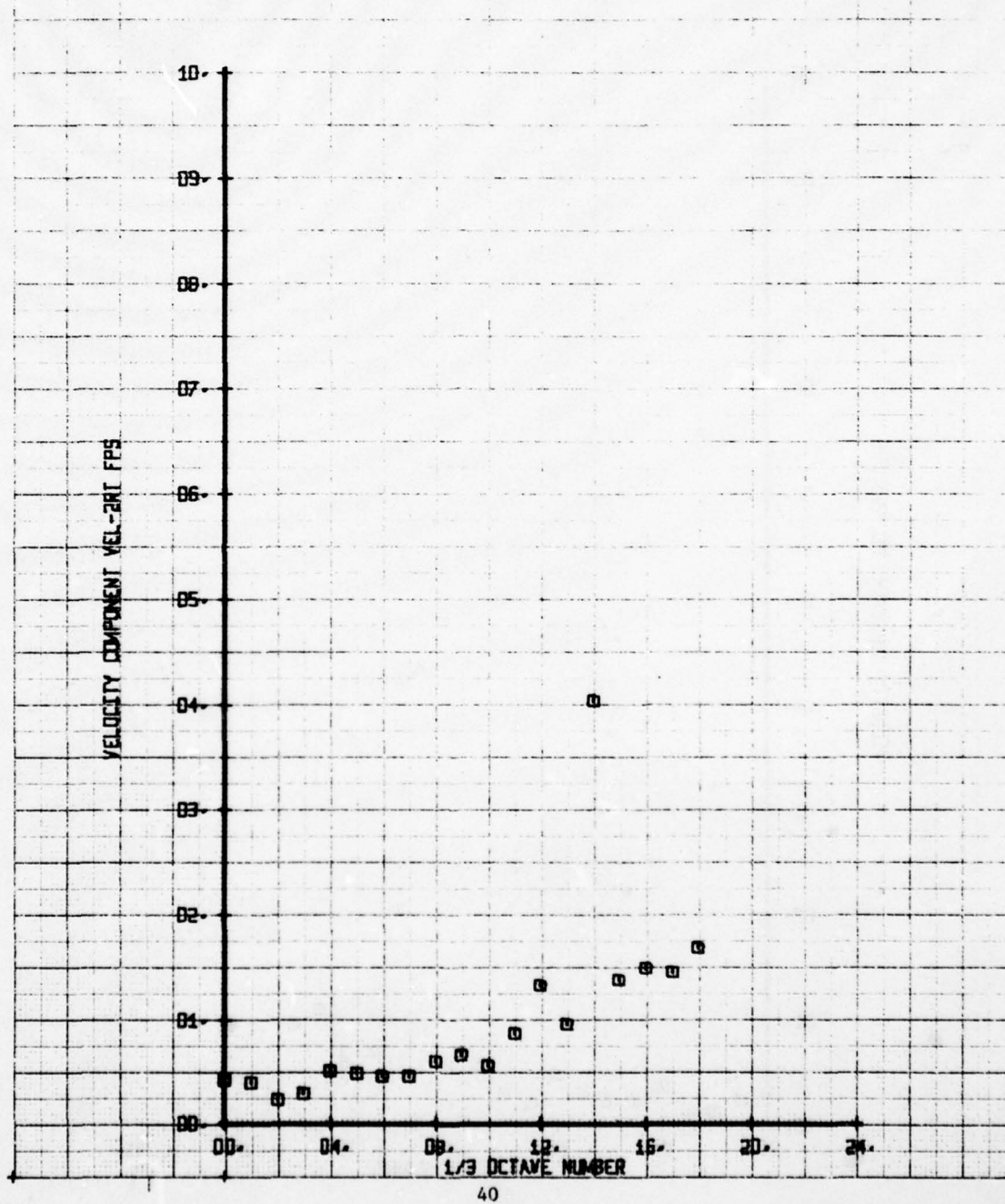
LEGEND

PARAMETER  
VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 4

LEGEND  
SYM CH PARAMETER  
□ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 FPM CLIMB

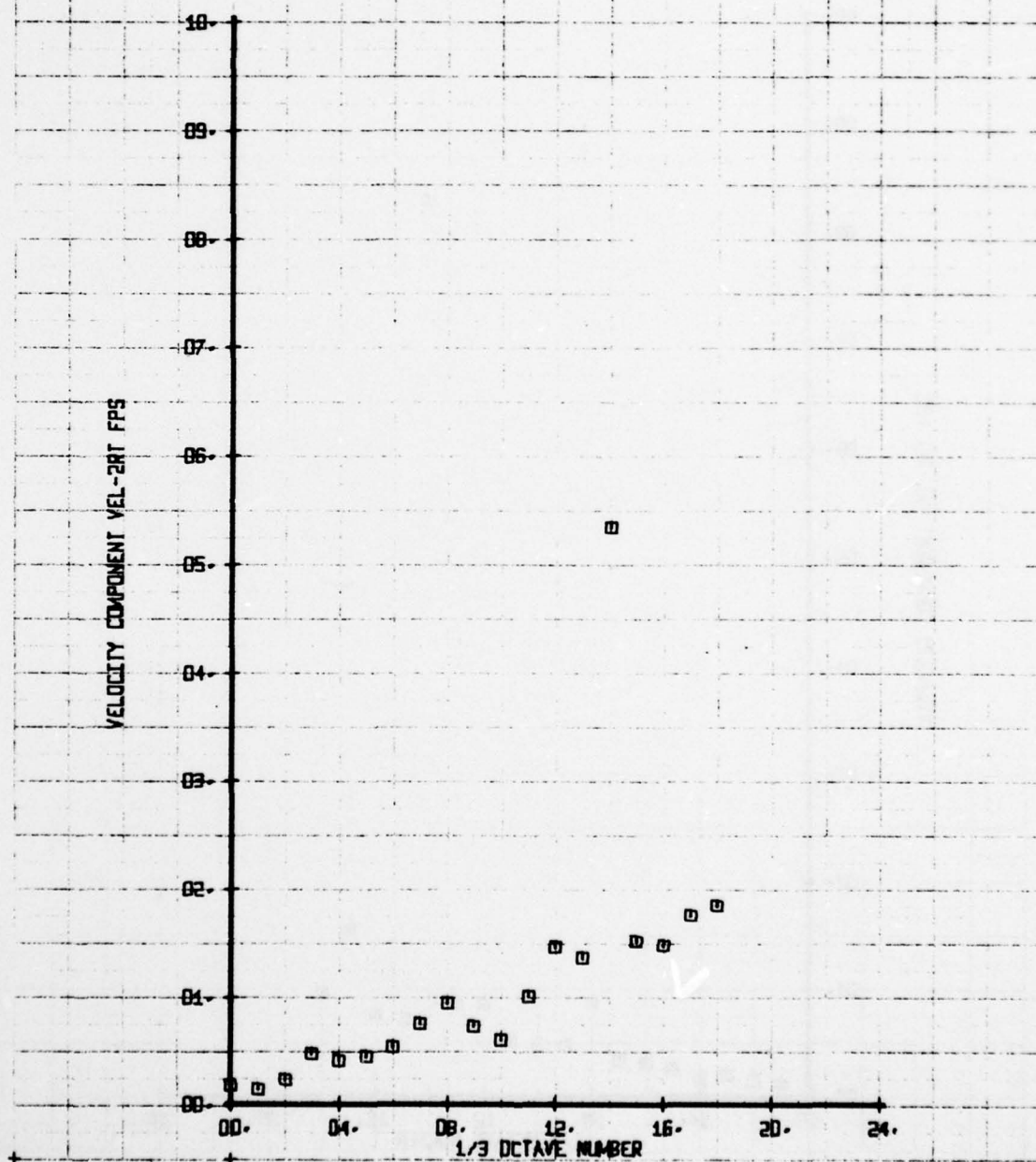
RUN 135 TP 6

SYM  
□

CH  
75

LEGEND

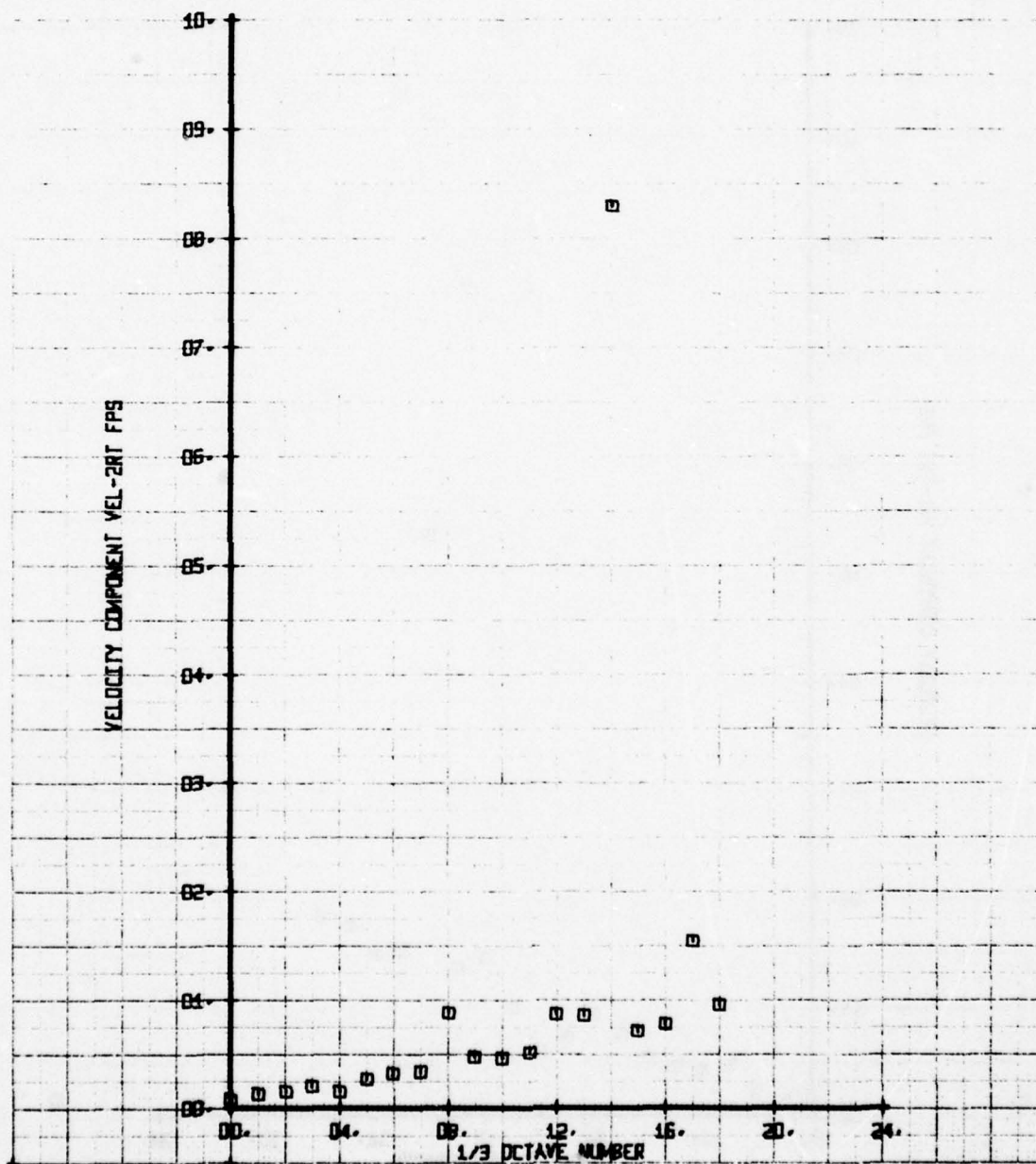
PARAMETER  
VEL-2RT





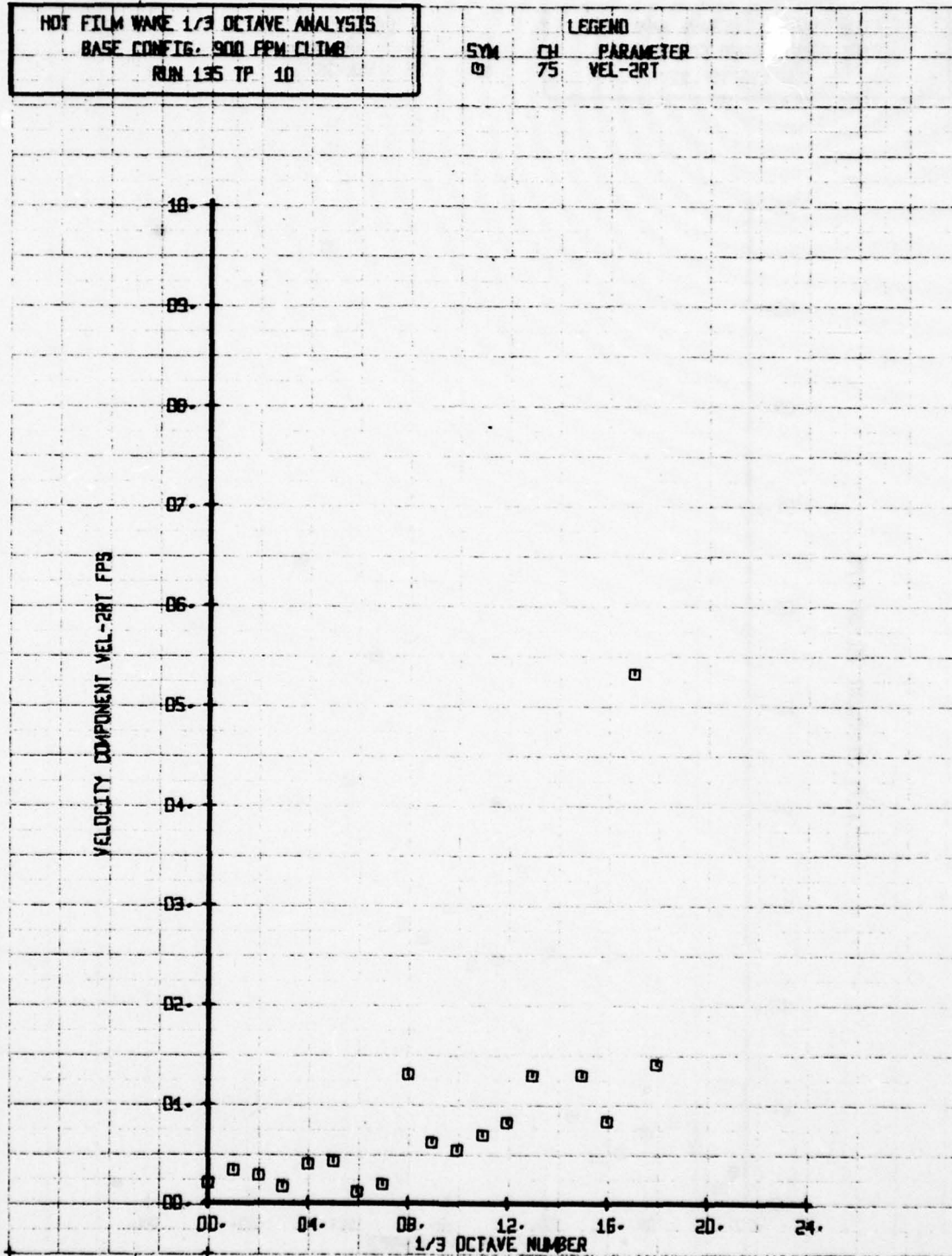
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 8

LEGEND  
SYM CH PARAMETER  
0 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 10

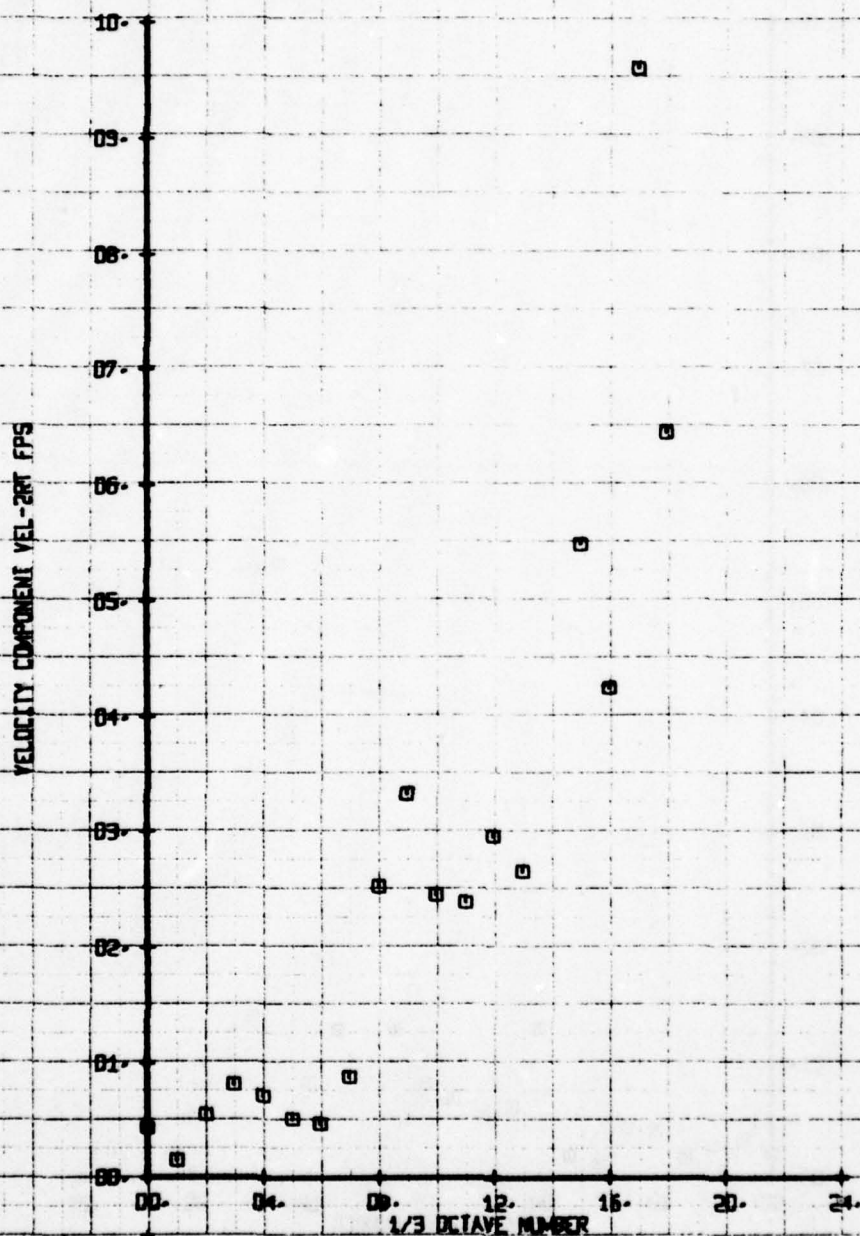
SYN	CH	PARAMETER
0	75	VEL-2RT



NOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM CLIMB  
 RUN 135 TP 12

SYM  
 □

LEGEND  
 EH 75  
 PARAMETER  
 VEL-2RT

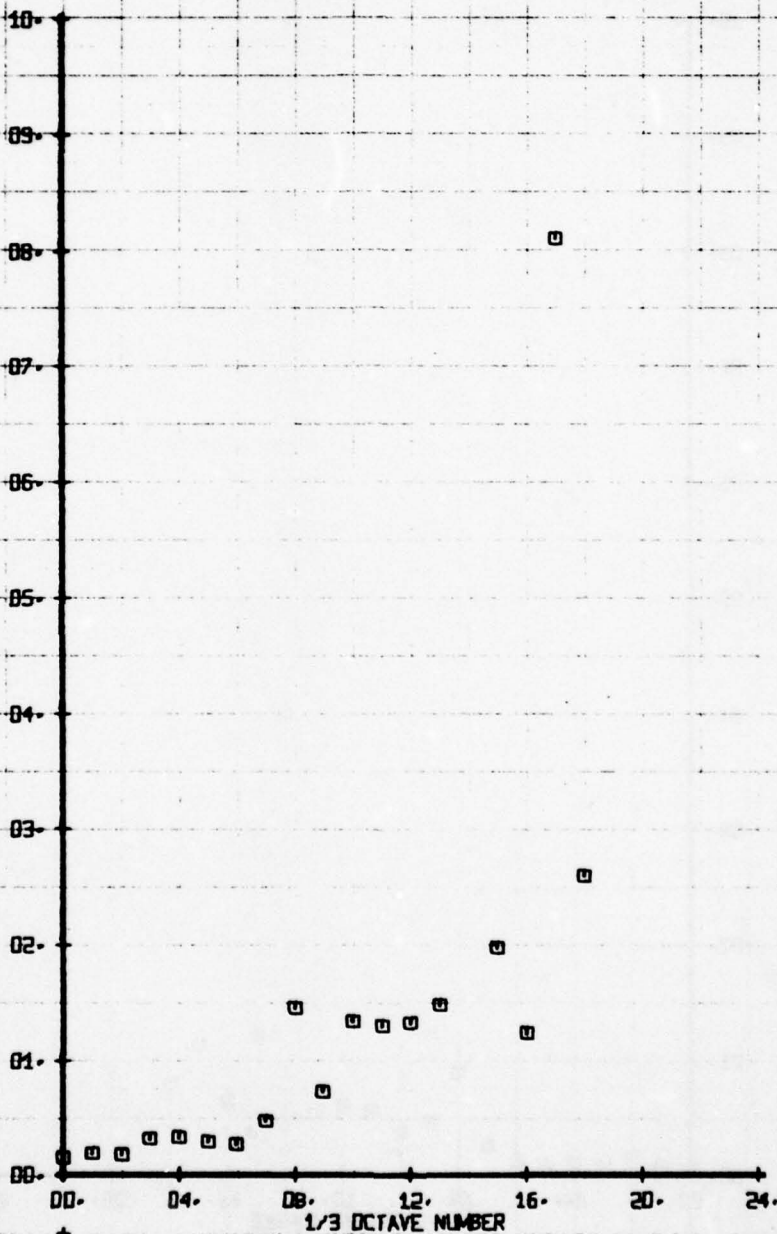




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 300 FPM CLING  
 RUN 135 TP 14

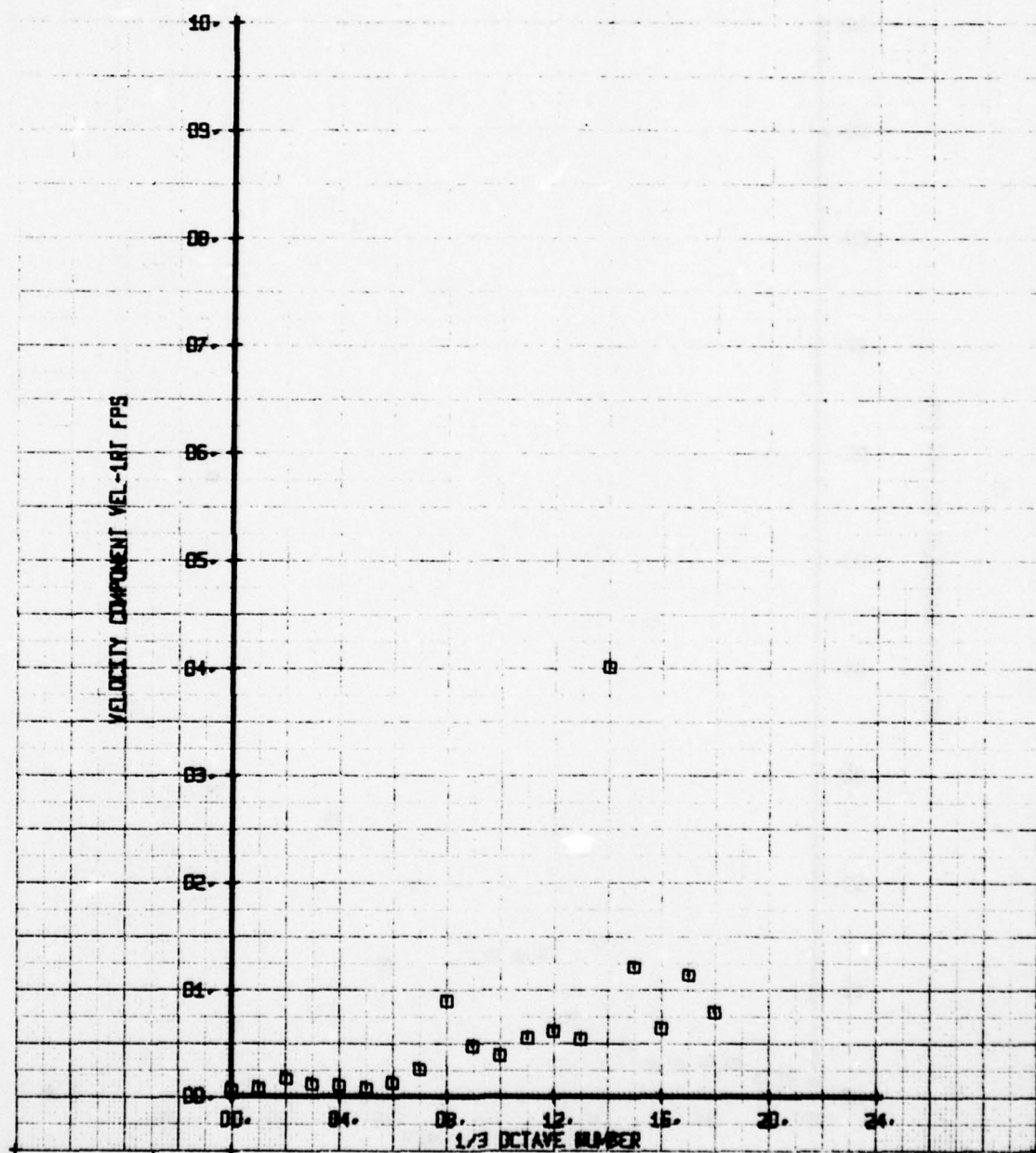
SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 2

LEGEND  
 SYM CH PARAMETER  
 □ 74 VEL-1RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS

BASE CONEIG. 900 RPM CLIMB

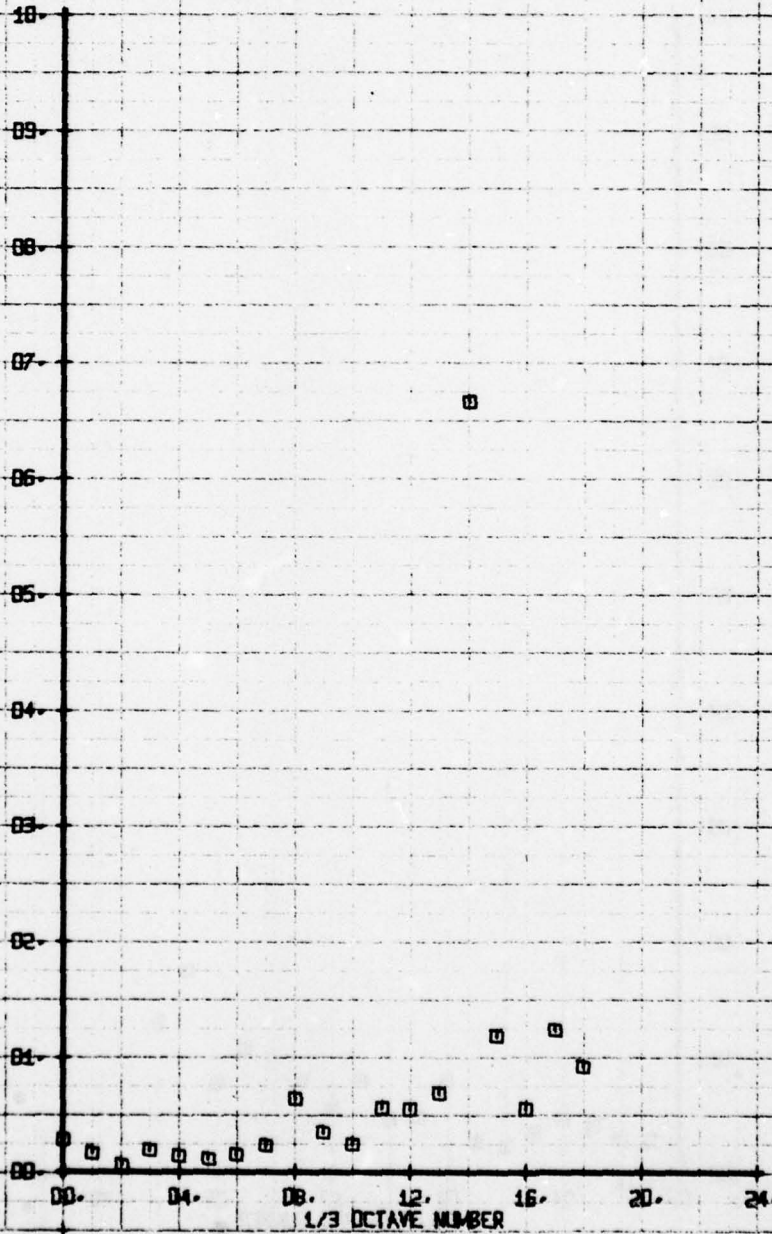
RUN 135 TP 4

SYM  
□

LEGEND

CH: 74  
PARAMETER  
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS





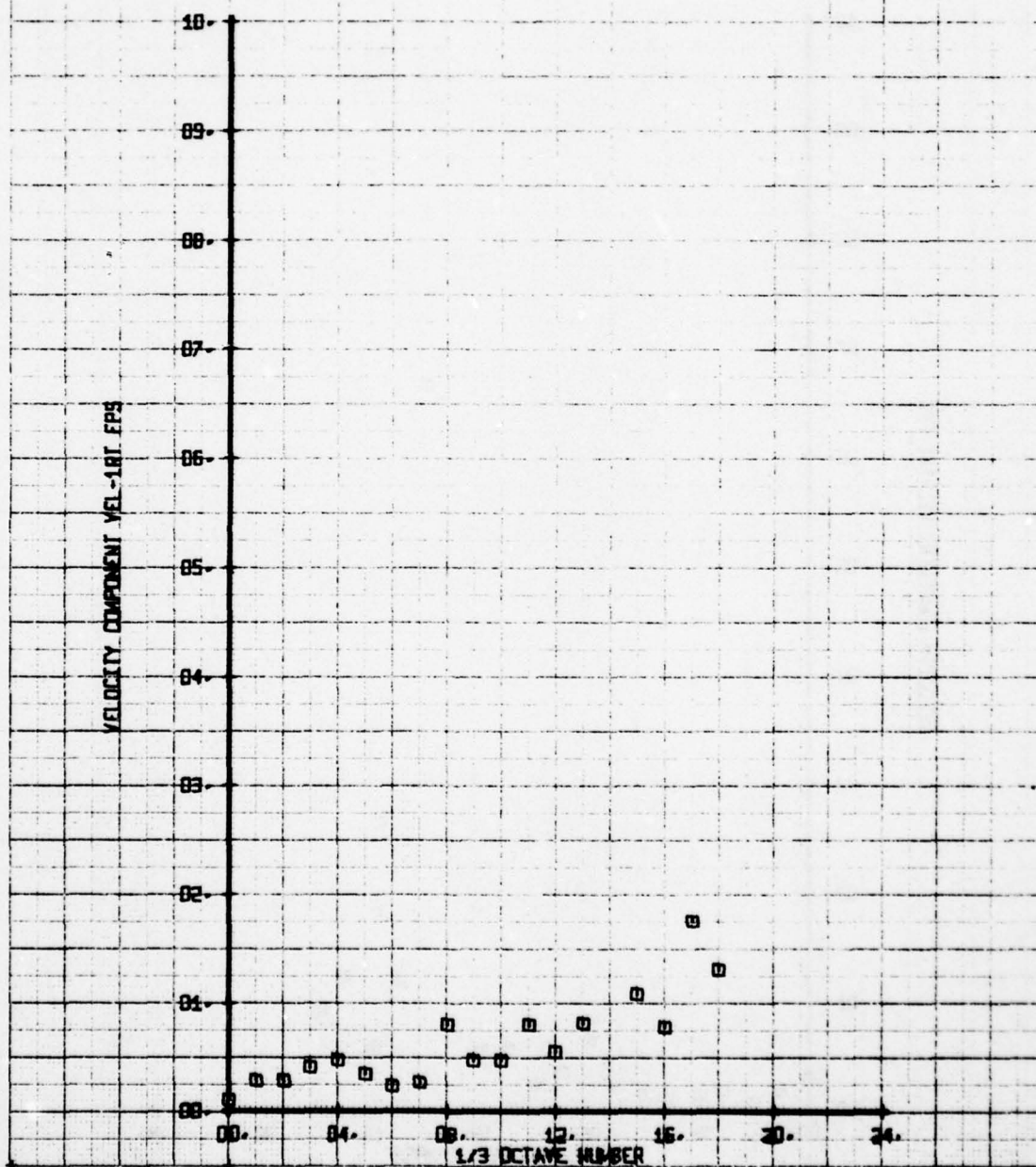
# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 FPM CLIMB

RUN 135 TP 6

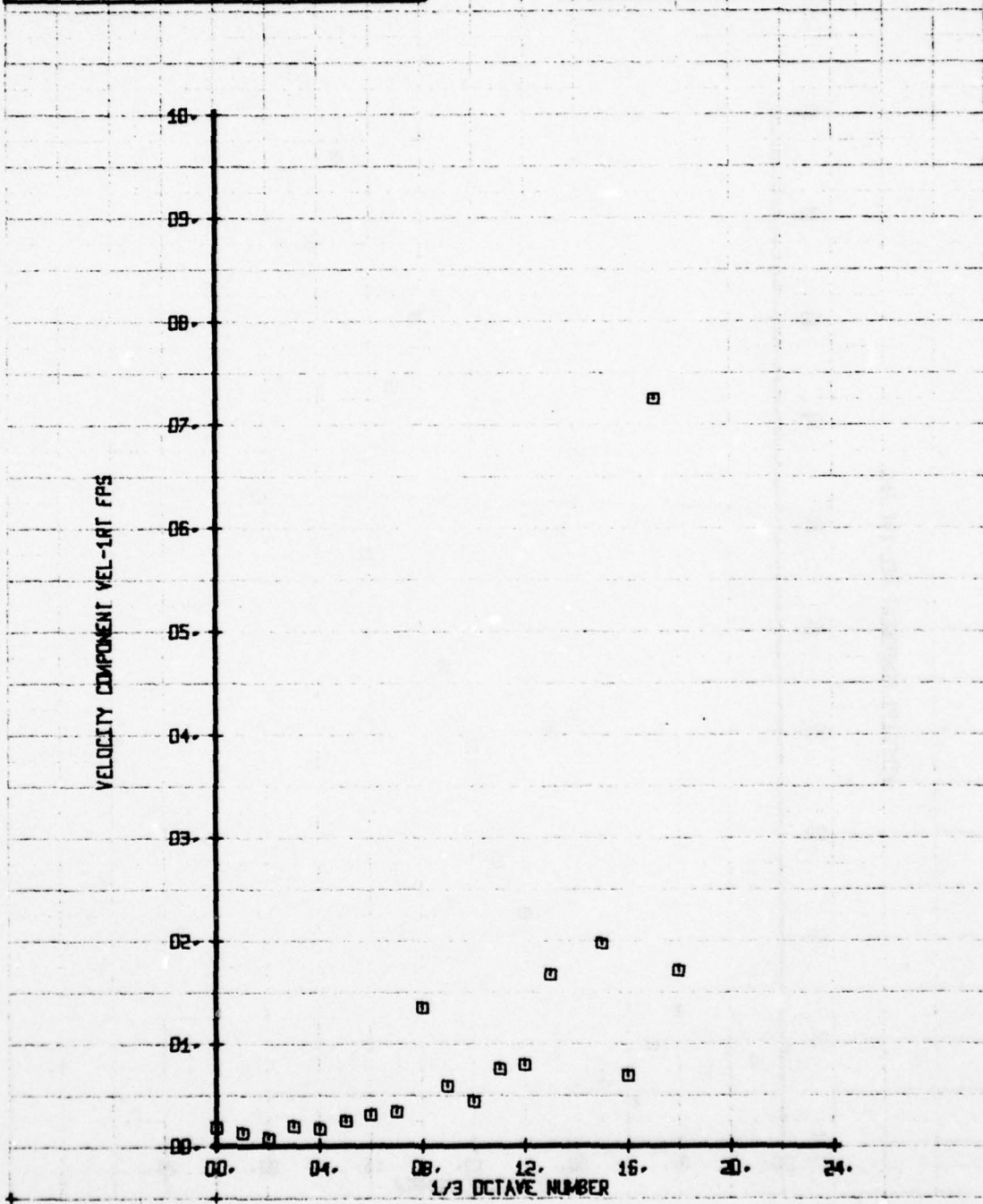
## LEGEND

SYM	CH	PARAMETER
□	74	VEL-1RT



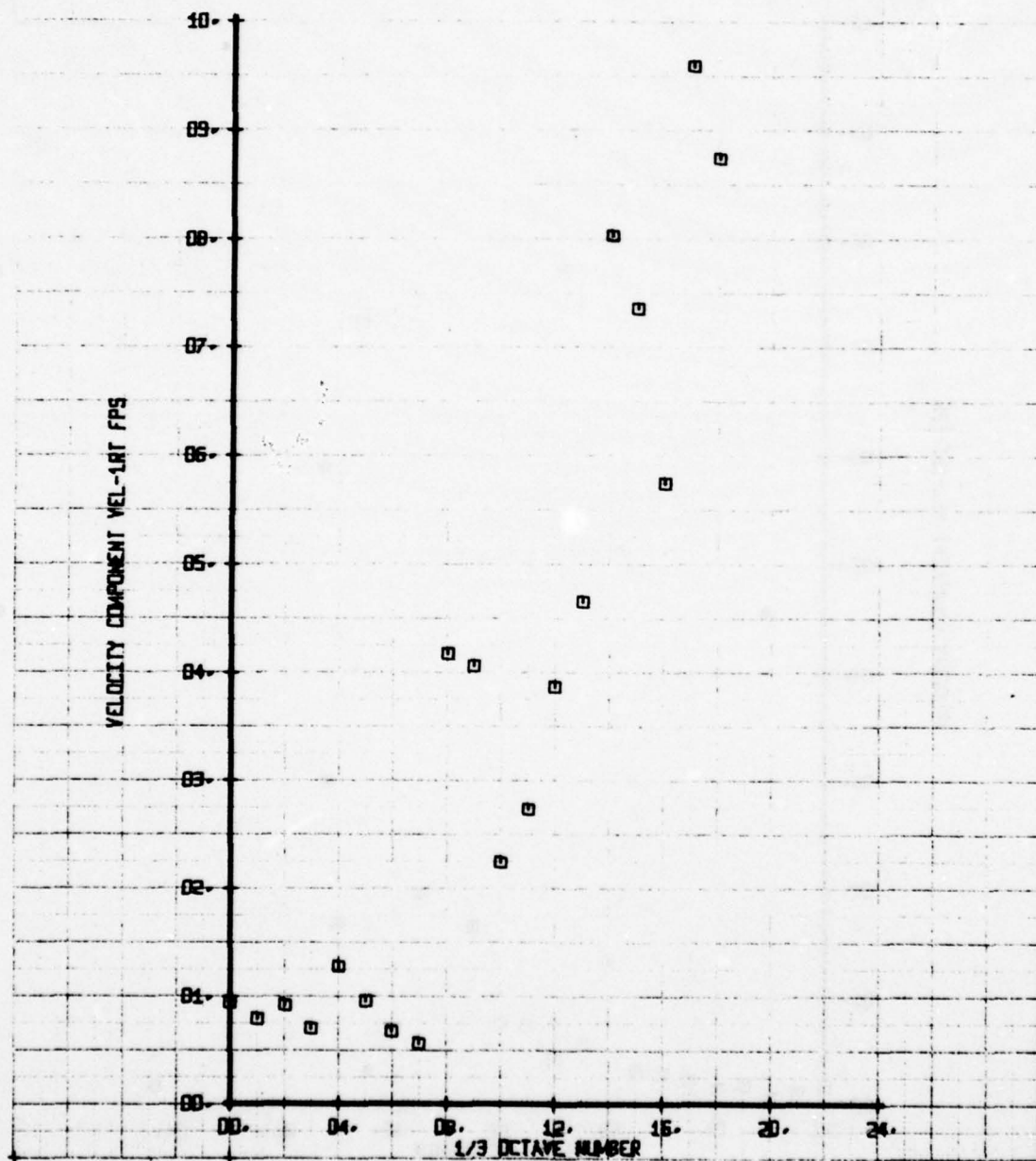
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 RPM CTMB  
 RUN 135 TP B

LEGEND  
 CH 74  
 PARAMETER  
 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 10

LEGEND  
SYM CH PARAMETER  
□ 74 VEL-1RT





# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 RPM CUTMB

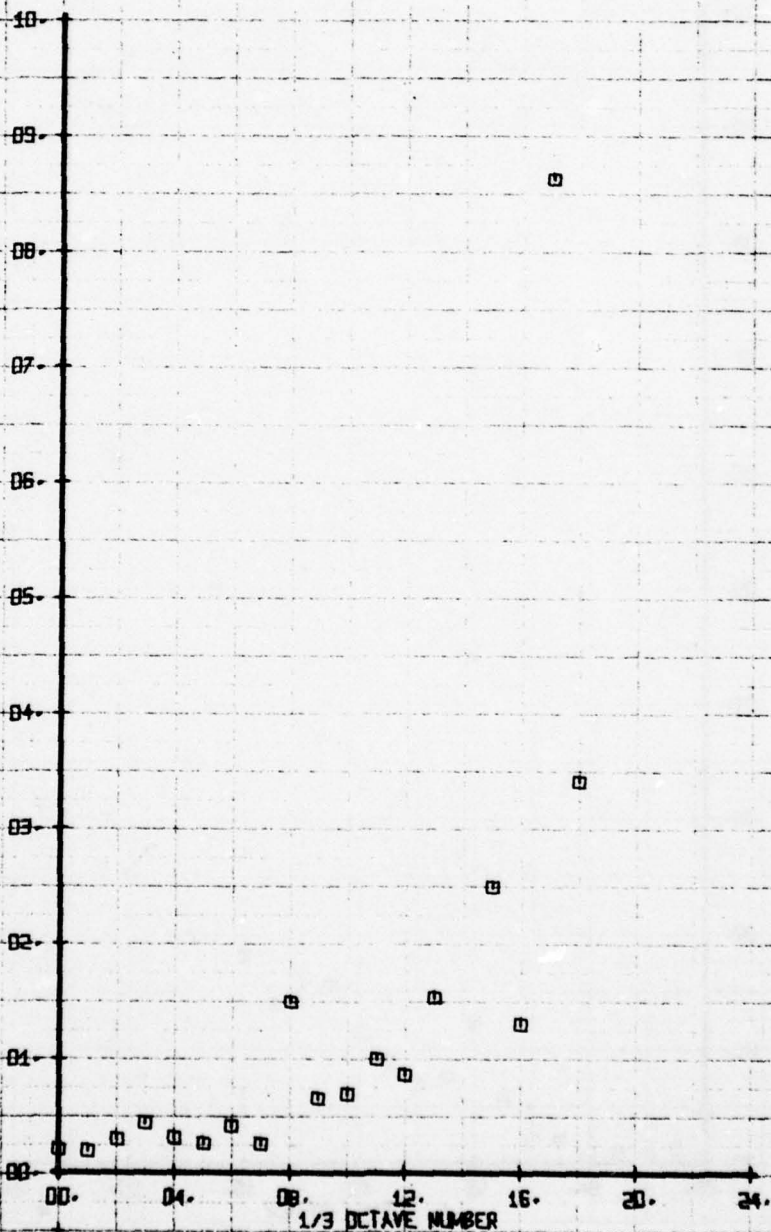
RUN 135 TP 12

SYM  
□

CH  
74

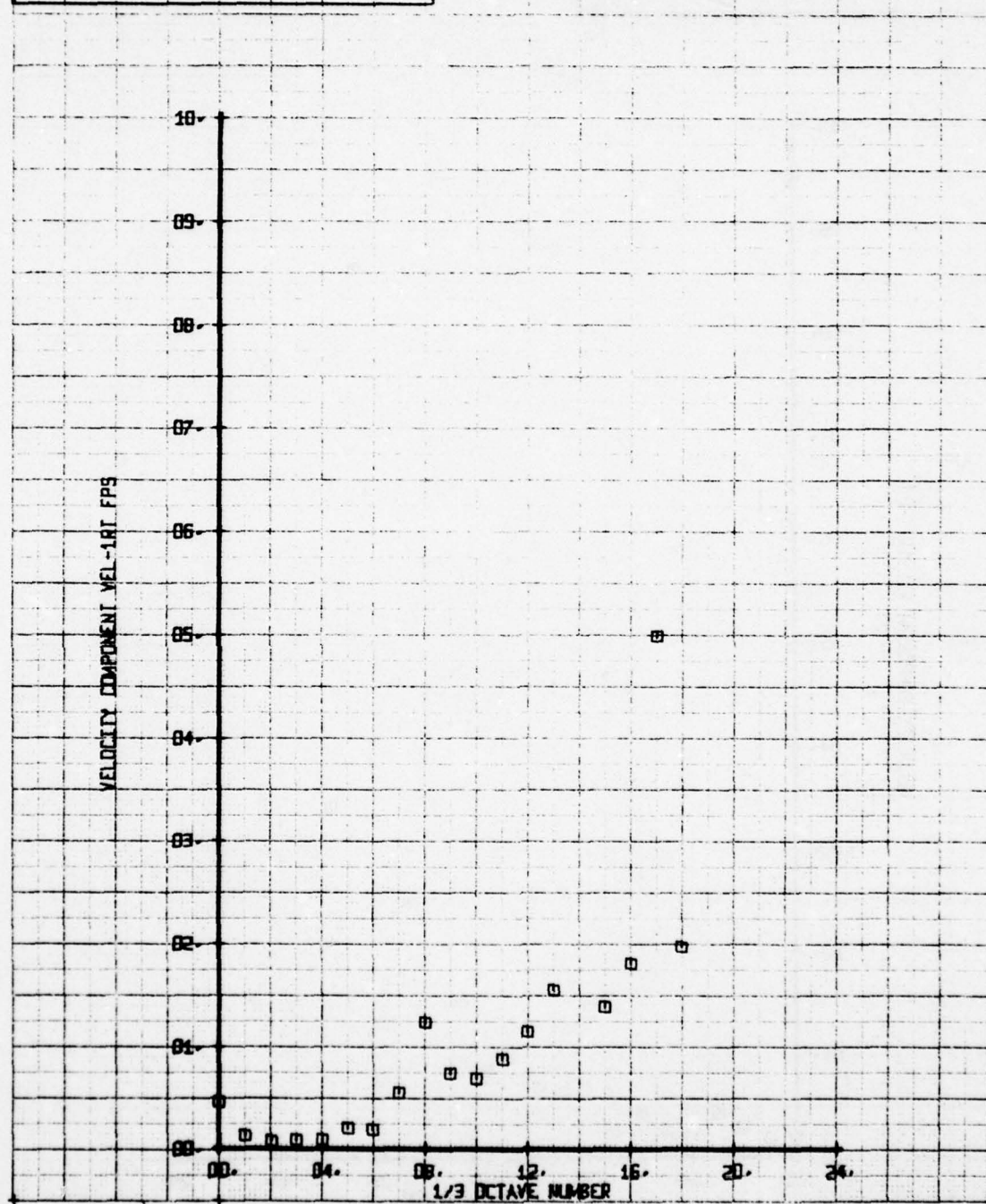
LEGEND  
PARAMETER  
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 14

LEGEND		
SYM	CH	PARAMETER
□	74	VEL-1RT



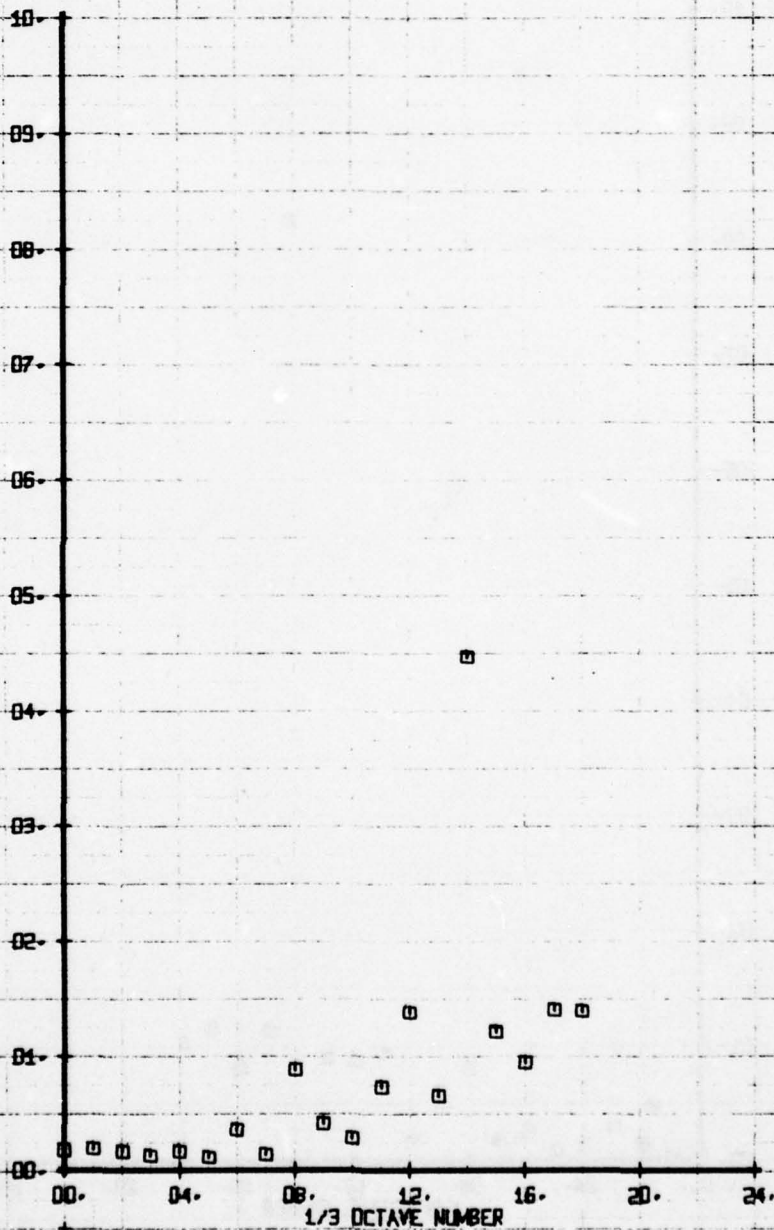
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE LONFIG. 900 RPM CLIMB  
RUN 135 TP 2

SYM  
□

CH  
73

LEGEND  
PARAMETER  
VEL-1LT

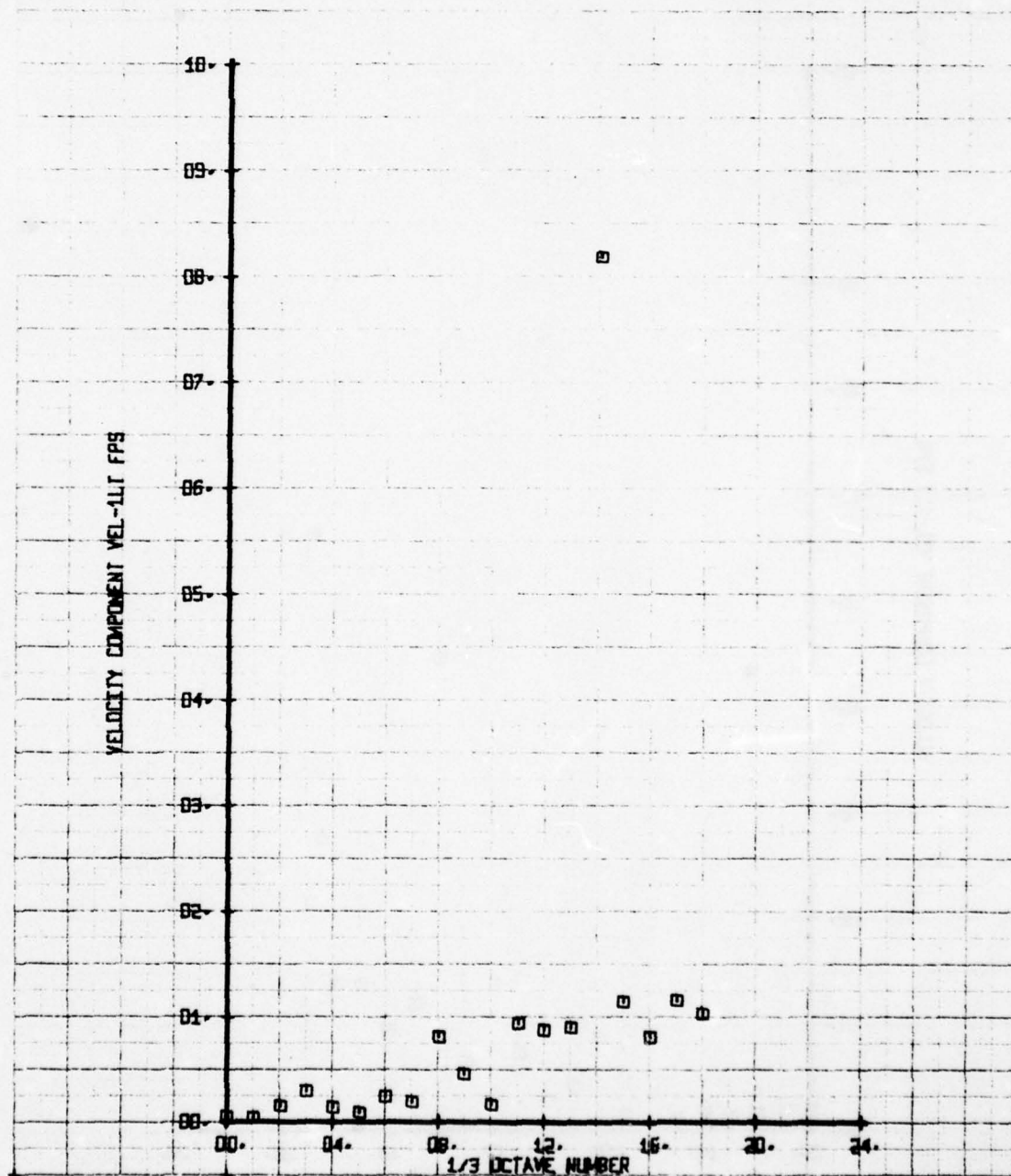
VELOCITY COMPONENT VEL-1LT FPS





NOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 4

LEGEND  
SYM CH PARAMETER  
□ 73 VEL-1LT



# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 RPM C/TMB

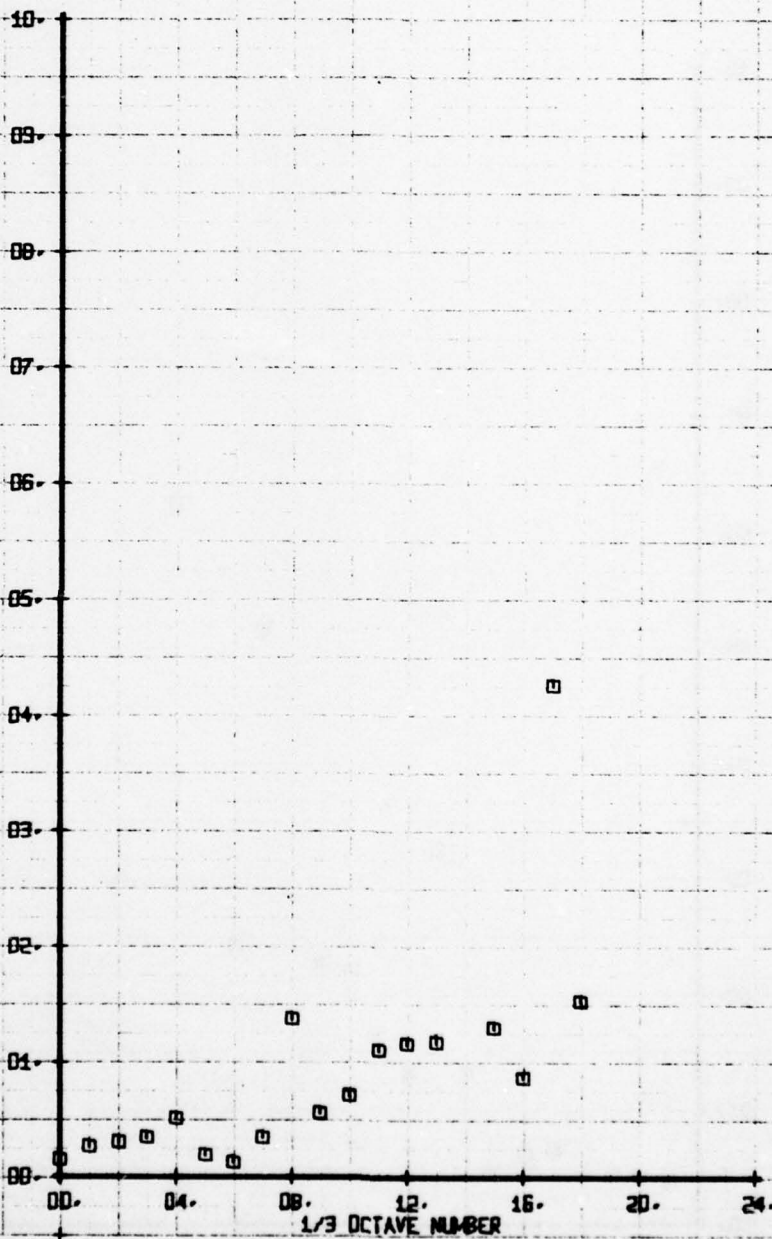
RUN 135 TP 6

SYM  
□

## LEGEND

CH 73  
PARAMETER  
VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



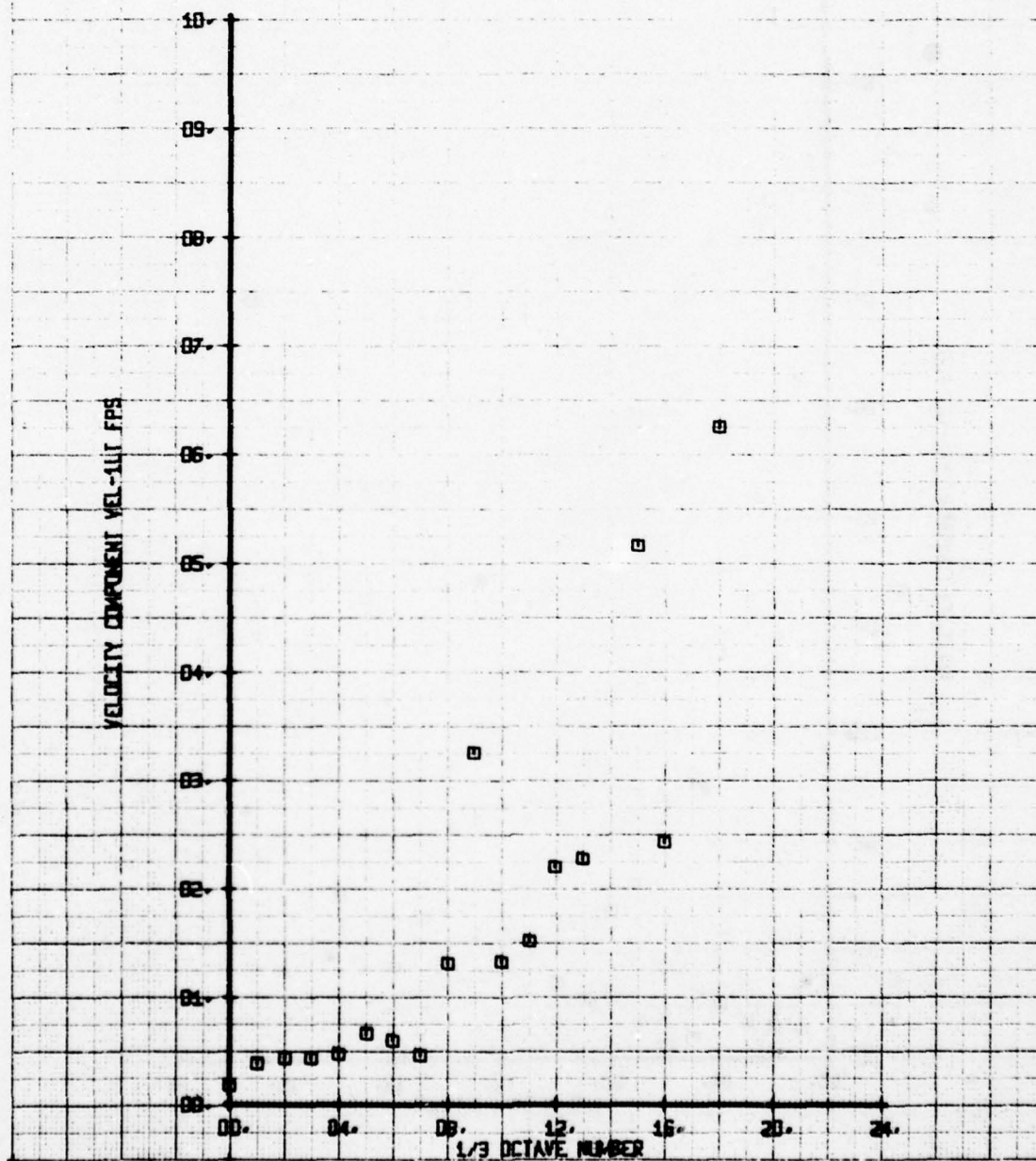
# HOT FILM WAVE 1/3 OCTAVE ANALYSIS

BASE CONFIG. 900 FPM CLIMB

RUN 135 TP 8

## LEGEND

SYM	CH	PARAMETER
□	73	VEL-1LT



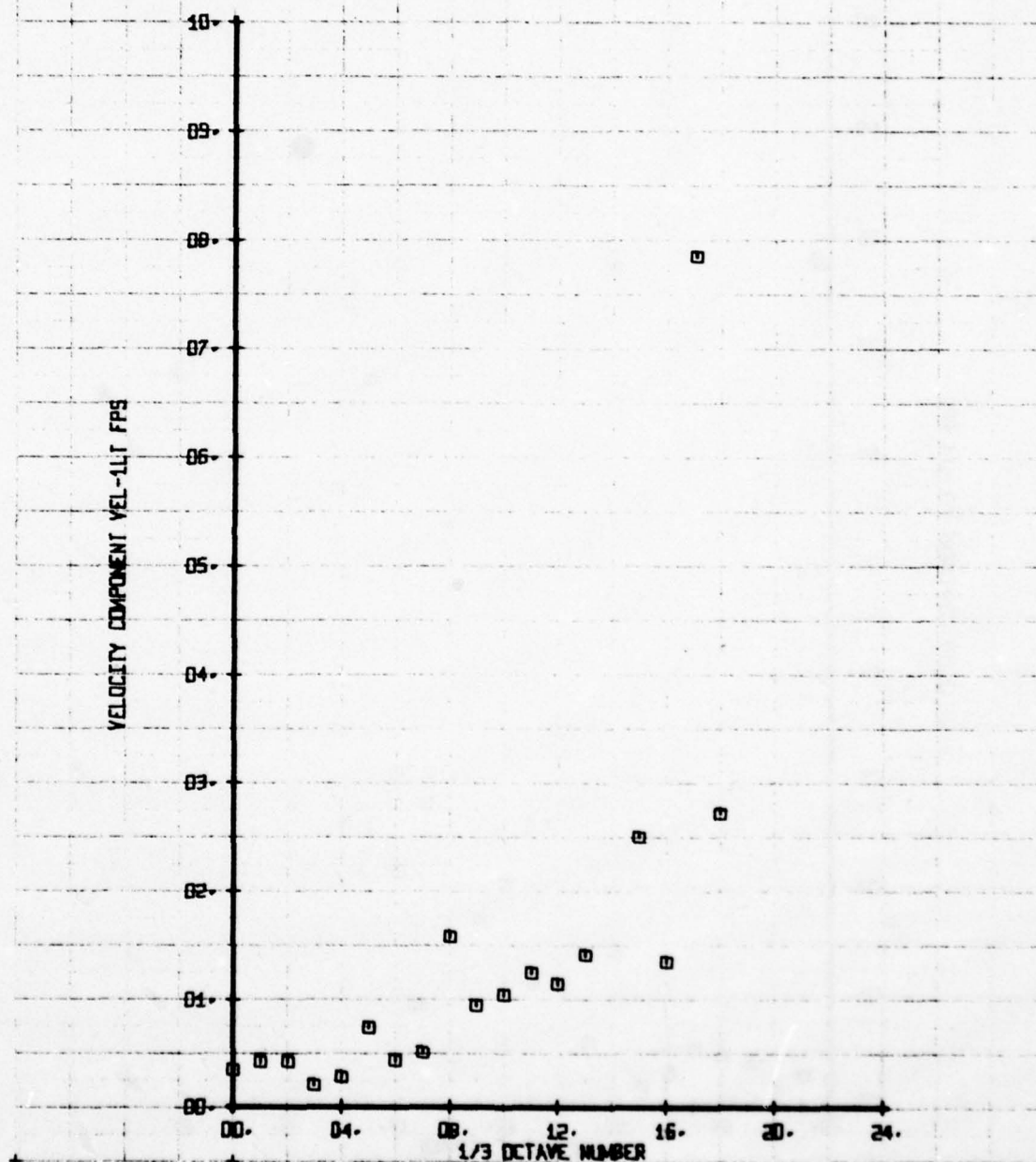


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 10

SYM  
□

CH  
73

LEGEND  
PARAMETER  
VEL-1LT

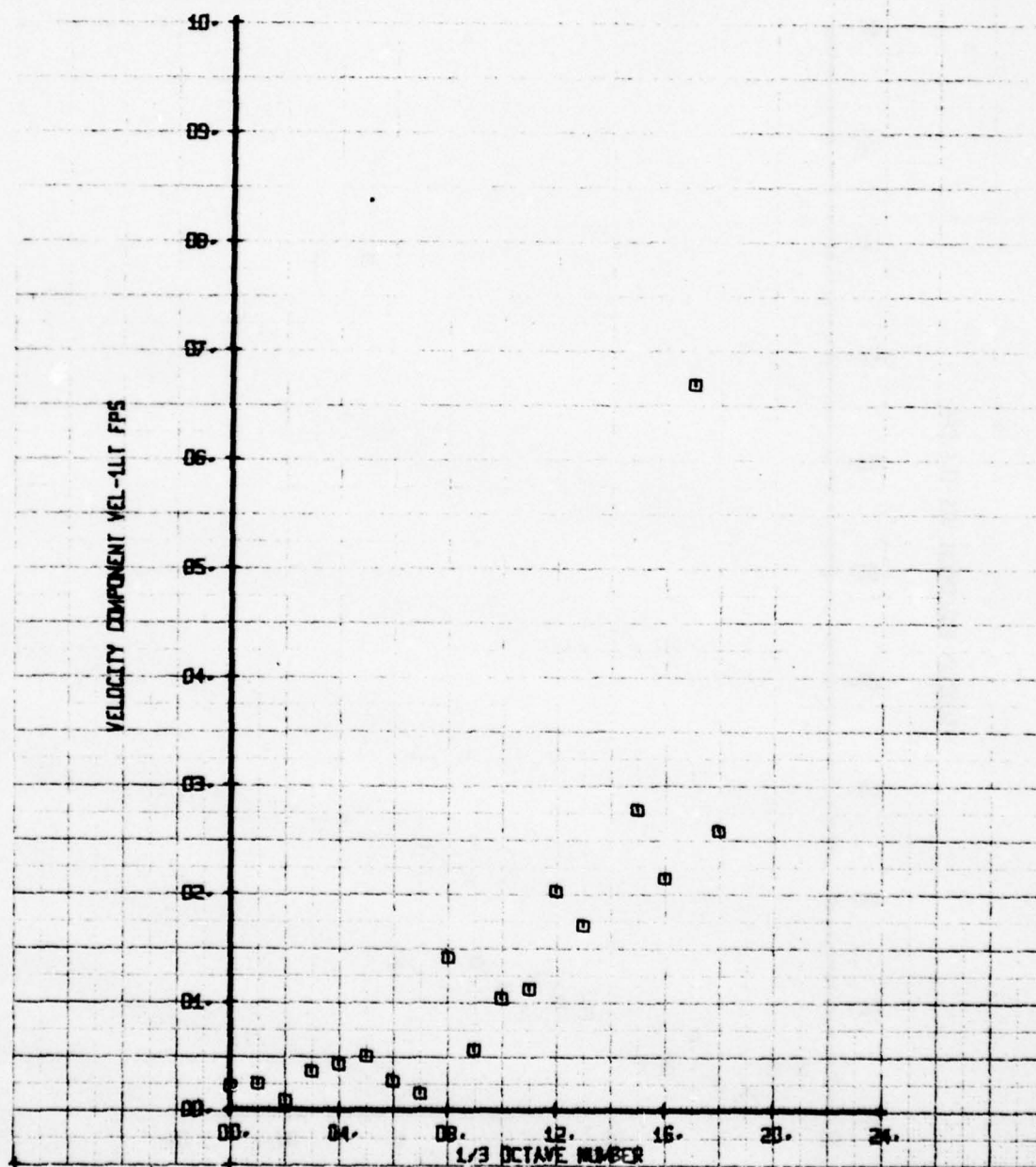


HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 12

SYM  
 □

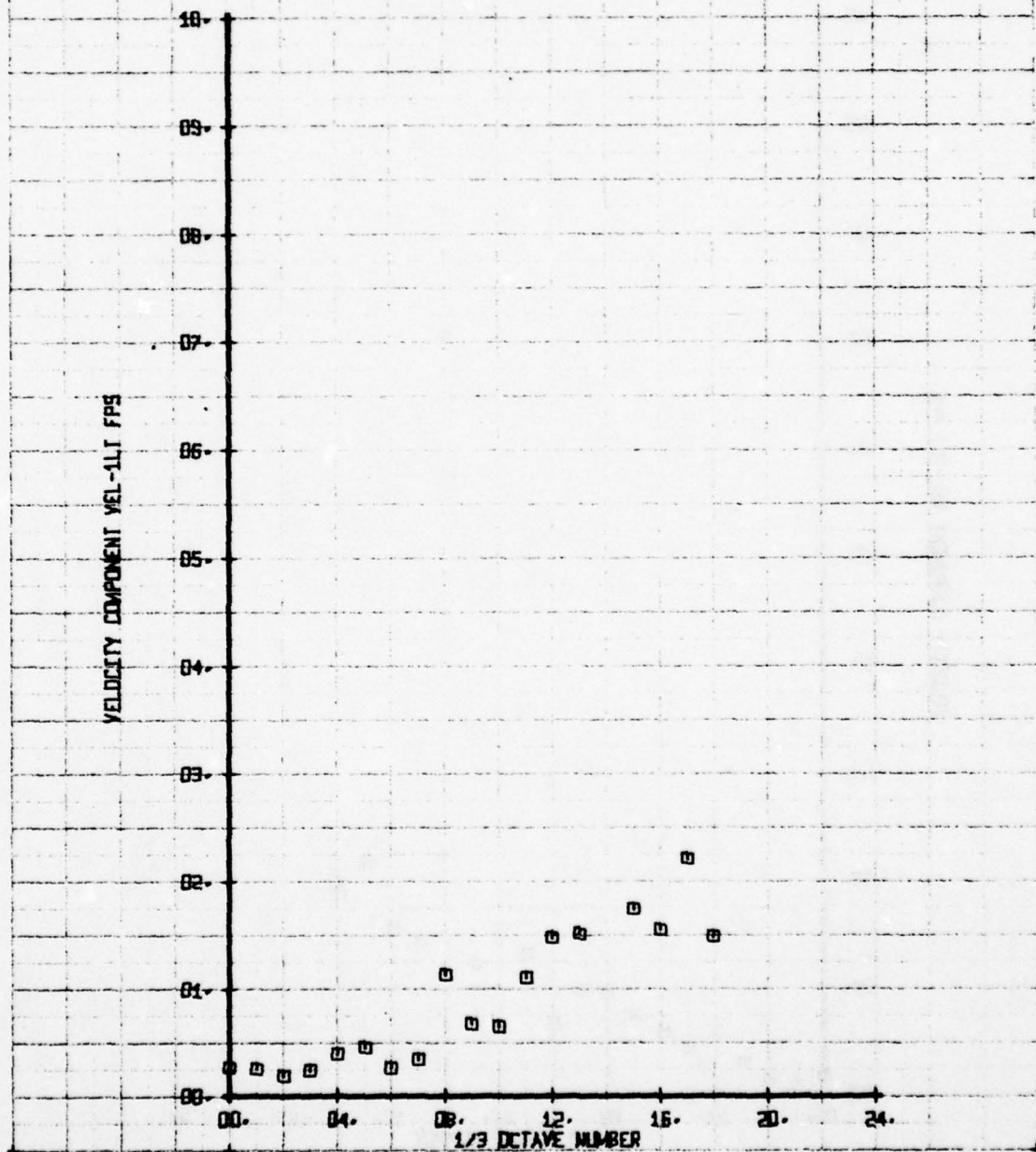
LEGEND

CH 73  
 PARAMETER  
 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 14

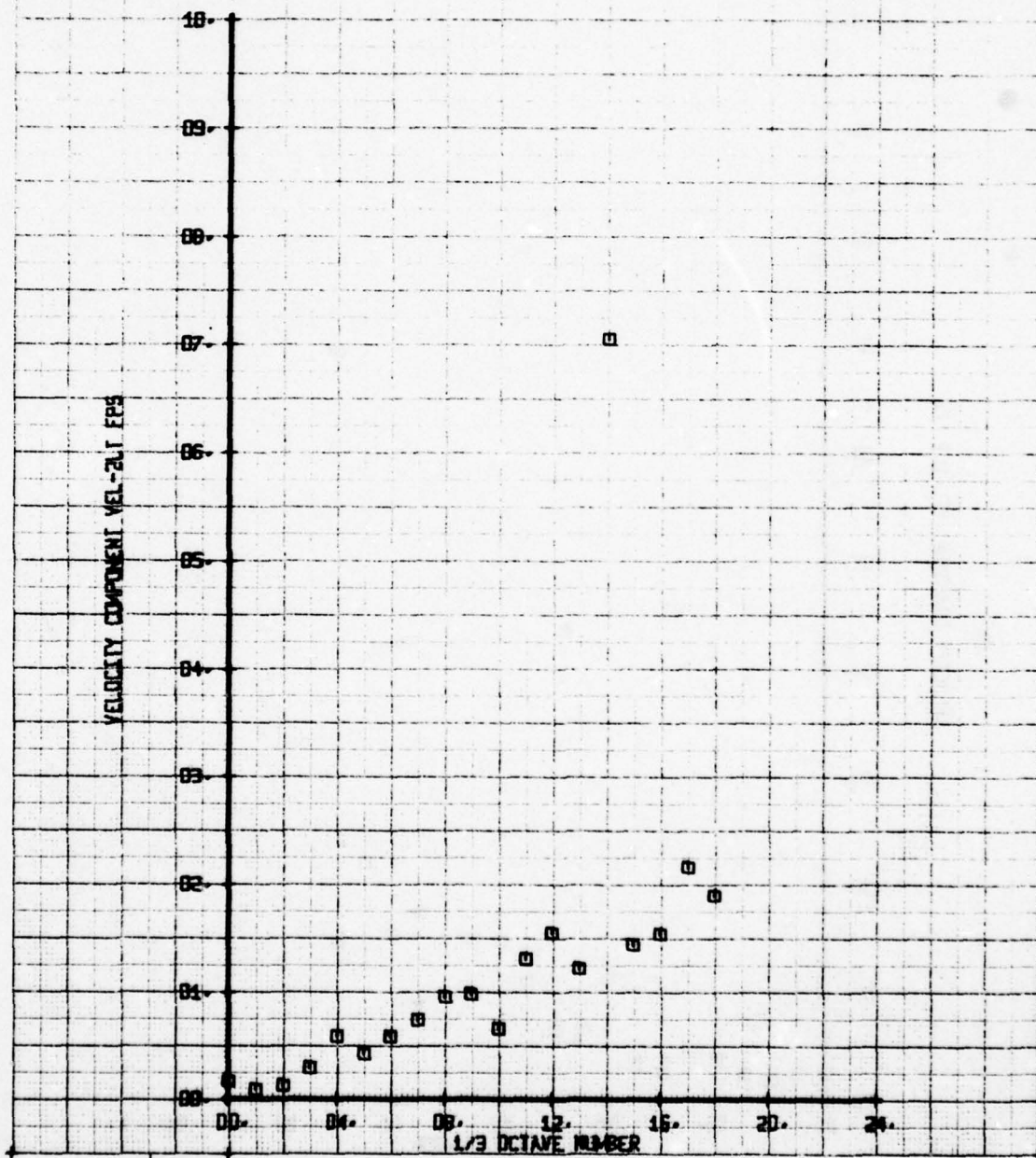
LEGEND	
SYM	CH: PARAMETER
□	73 VEL-1LT





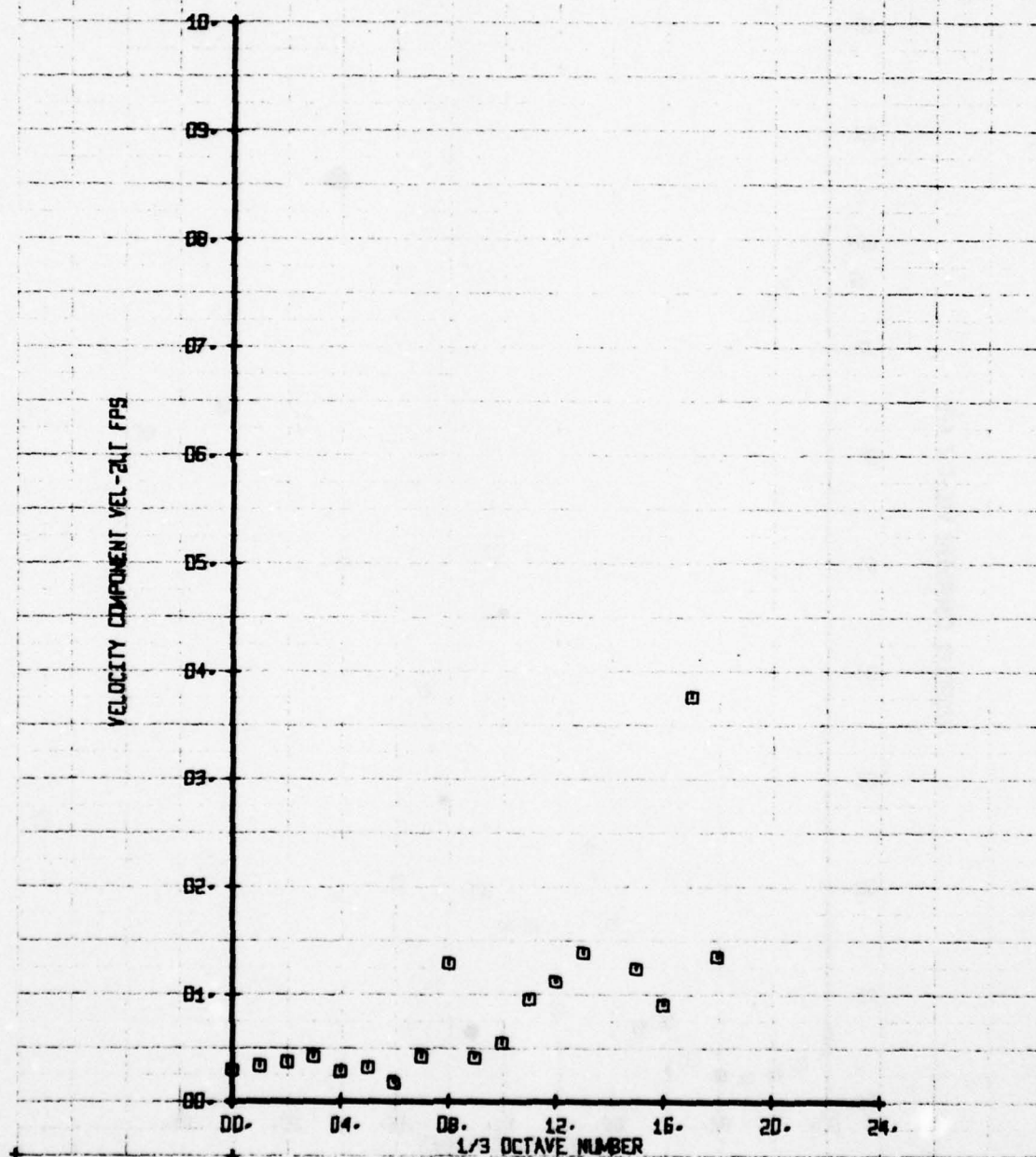
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 2

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT



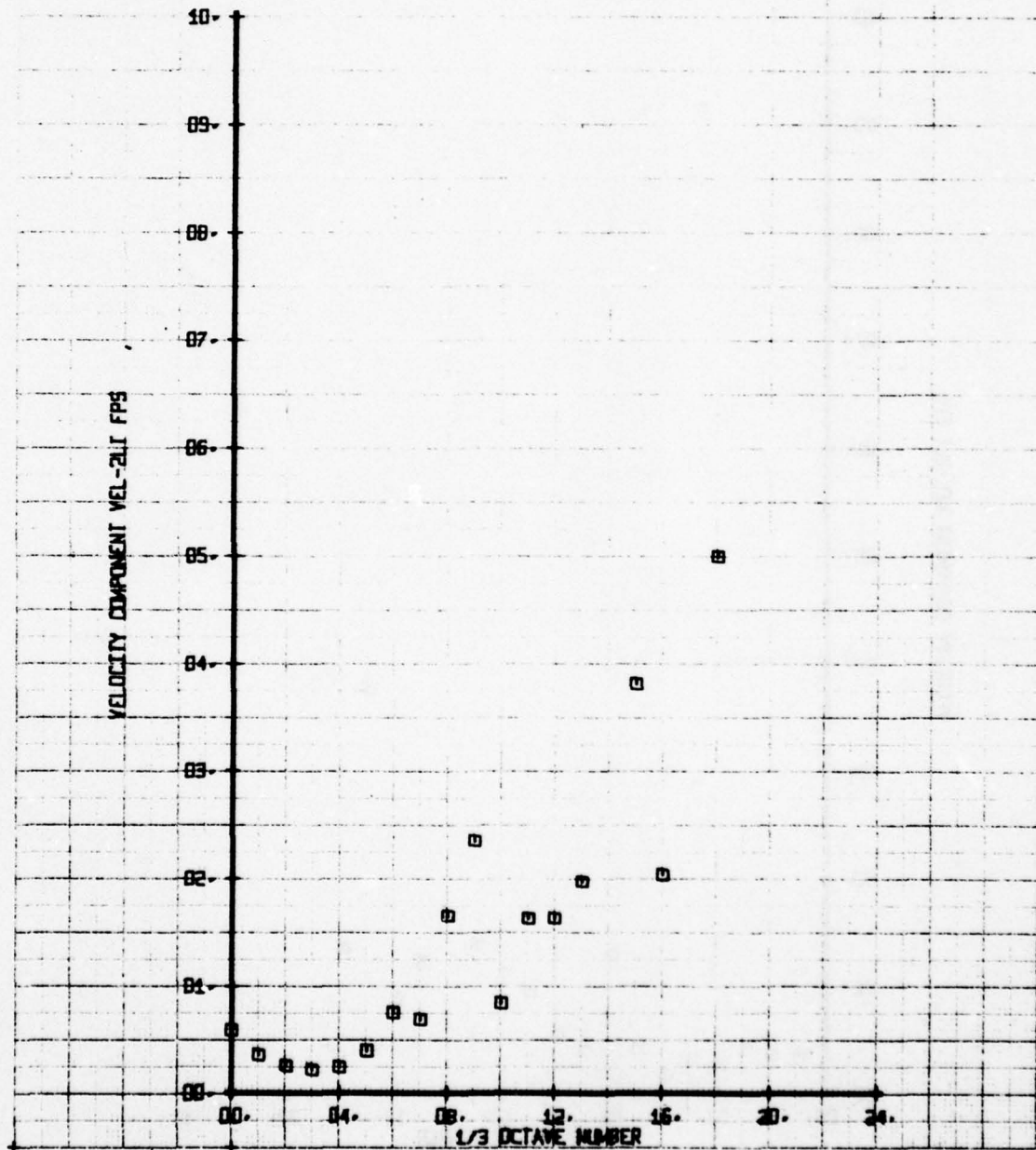
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 4

SYN CH PARAMETER  
 0 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 6

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT





# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONE 16. 900 RPM CLIMB

RUN 135 TP B

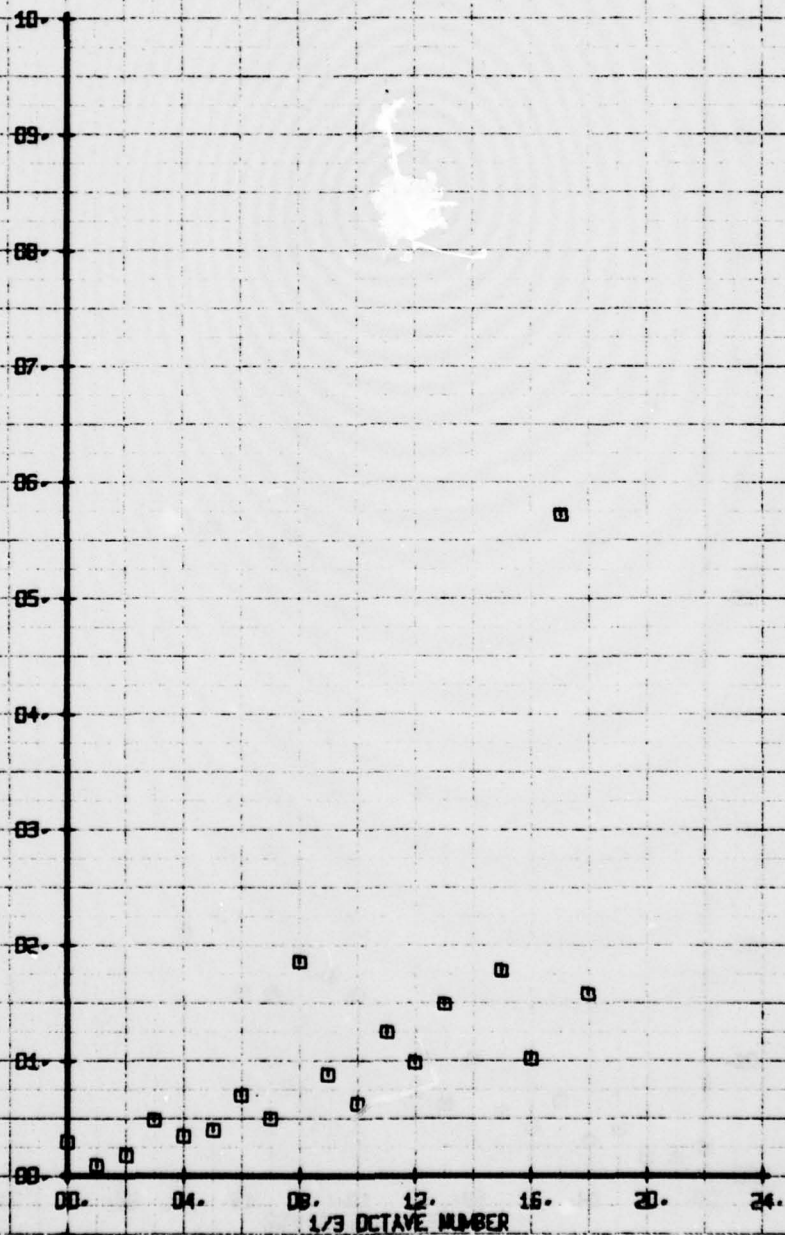
SYM  
□

CH  
72

## LEGEND

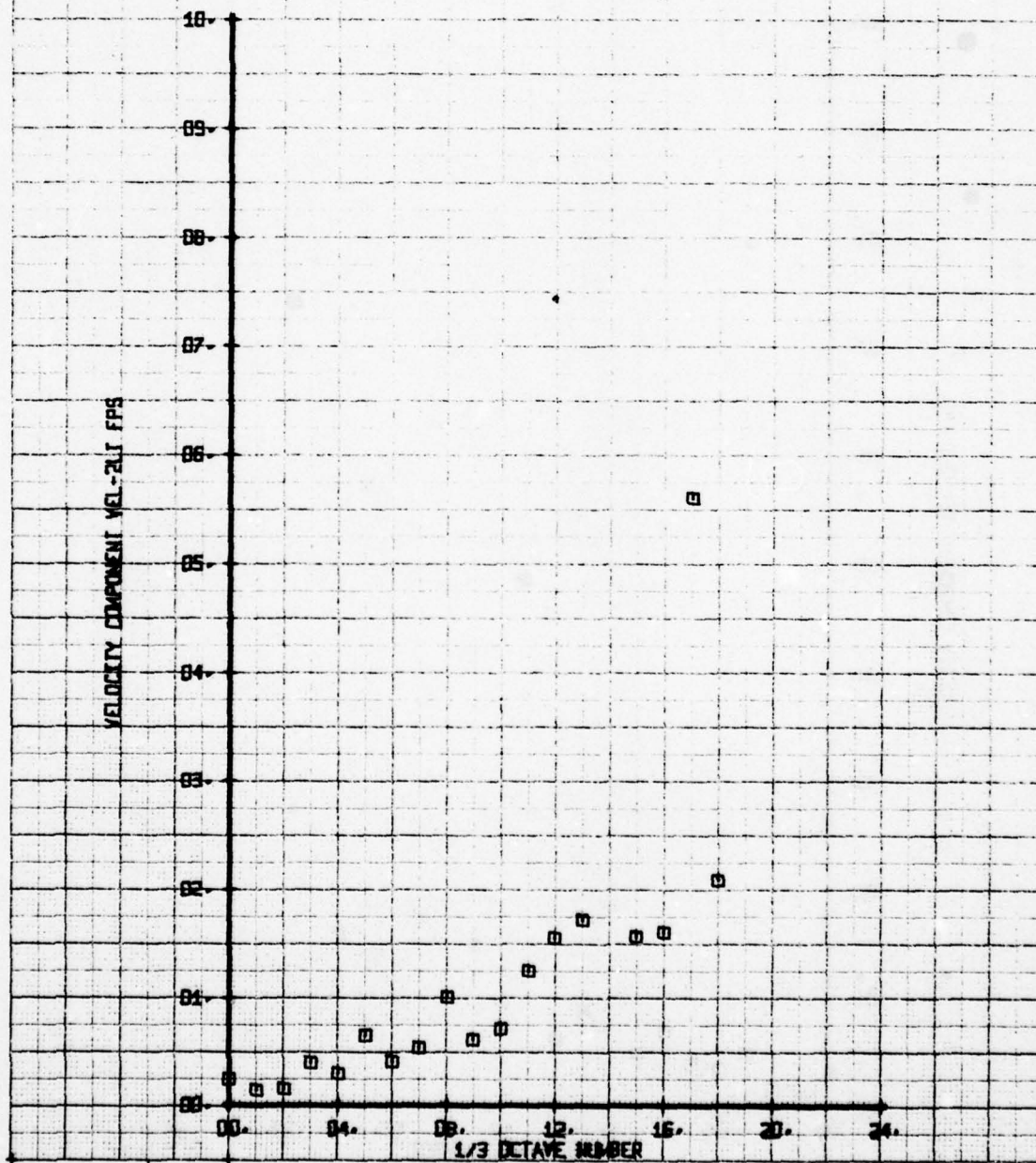
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



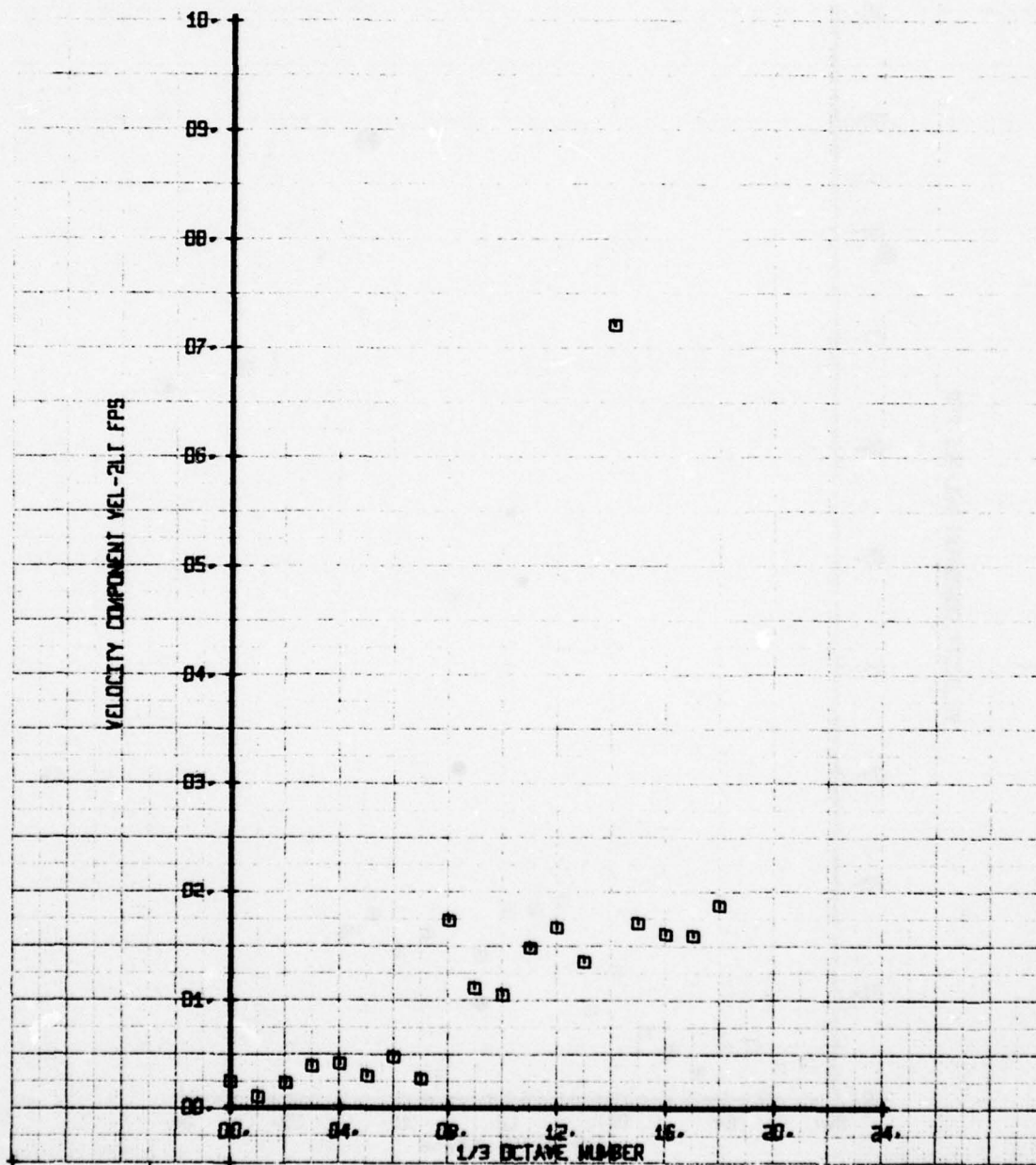
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 RPM CLIMB  
 RUN 135 TP 10

LEGEND  
 SYM CH PARAMETER  
 □ 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 12

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT

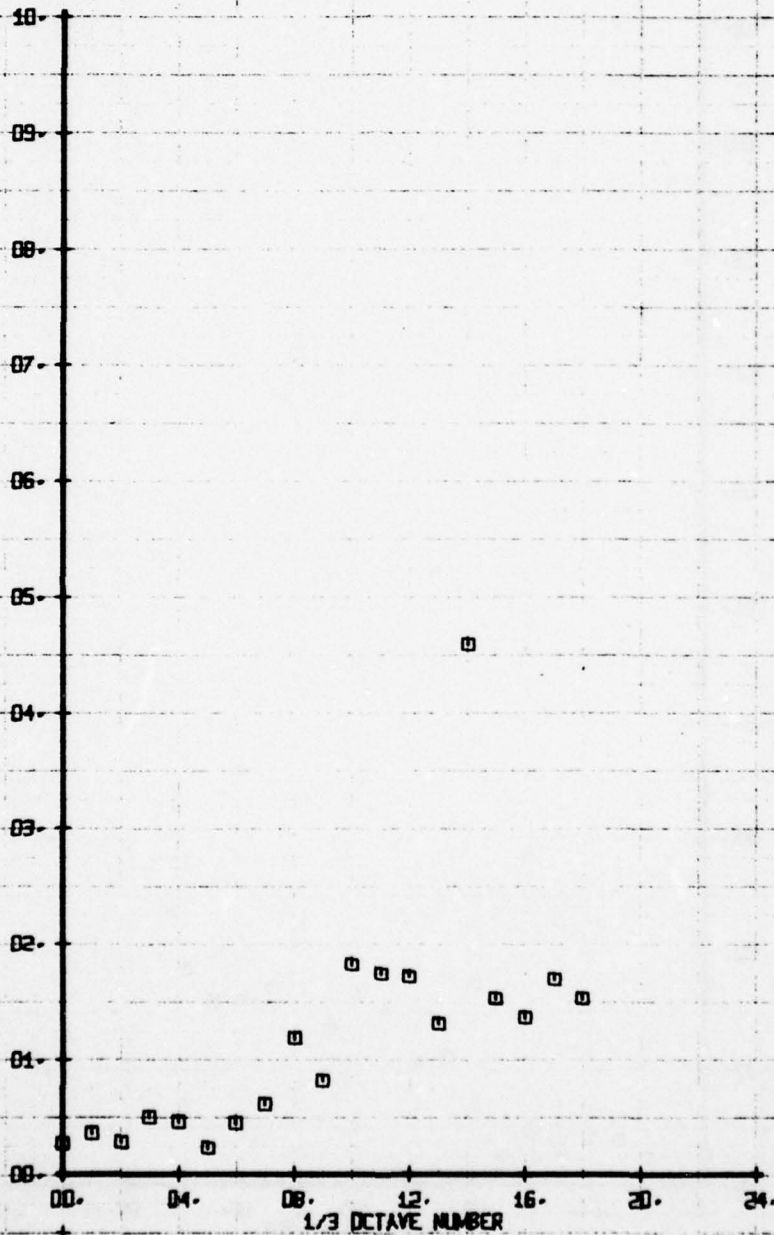




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP. 14

SYN CH PARAMETER  
0 72 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



# NOT FILM WAVE 1/3 OCTAVE ANALYSIS

BASE CONFIG: 900 RPM C/DMB

RUN 135 TP 2

SYM

0

CH

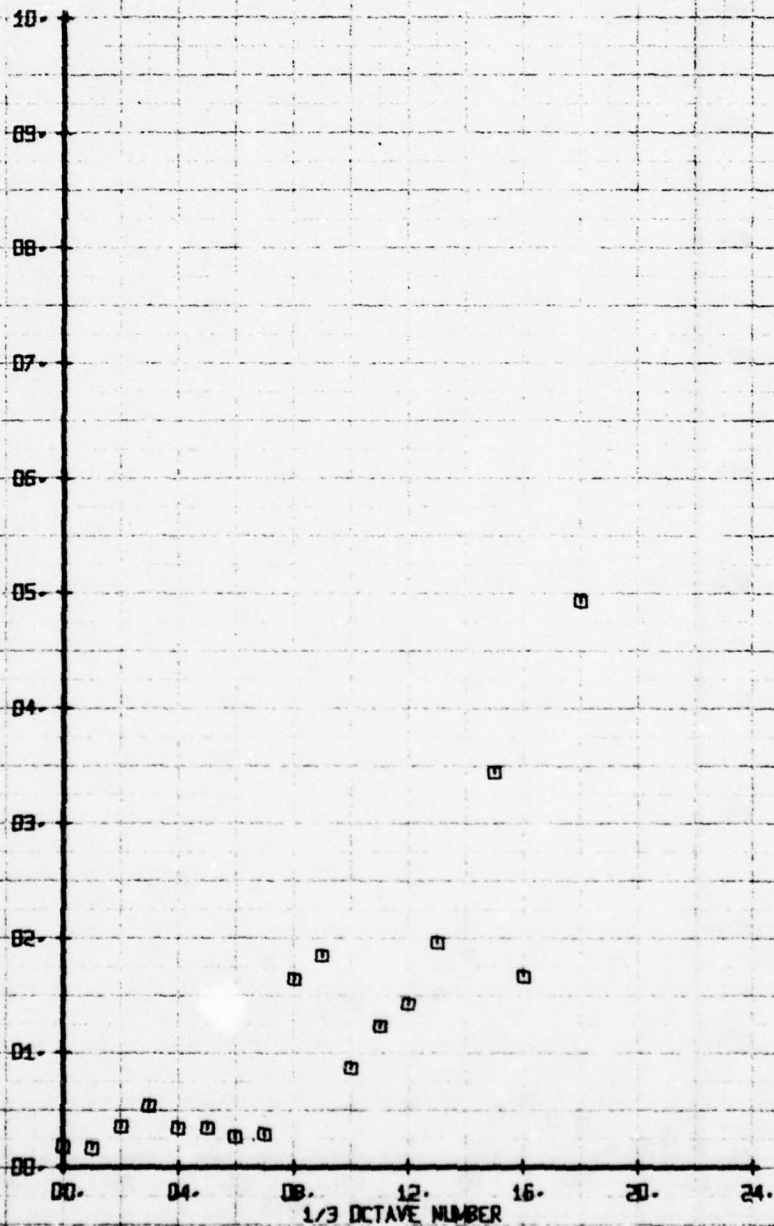
70

## LEGEND

PARAMETER

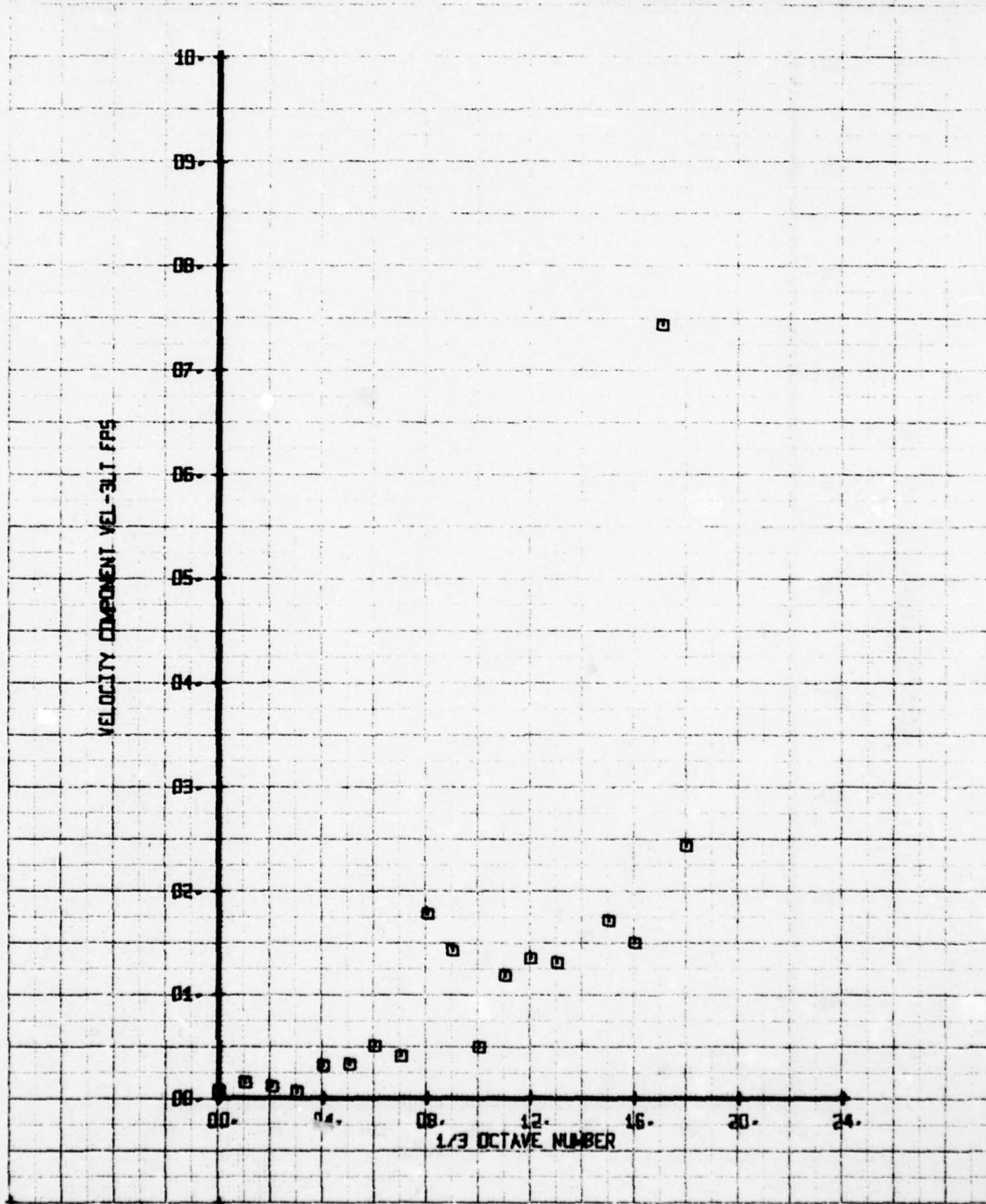
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 4

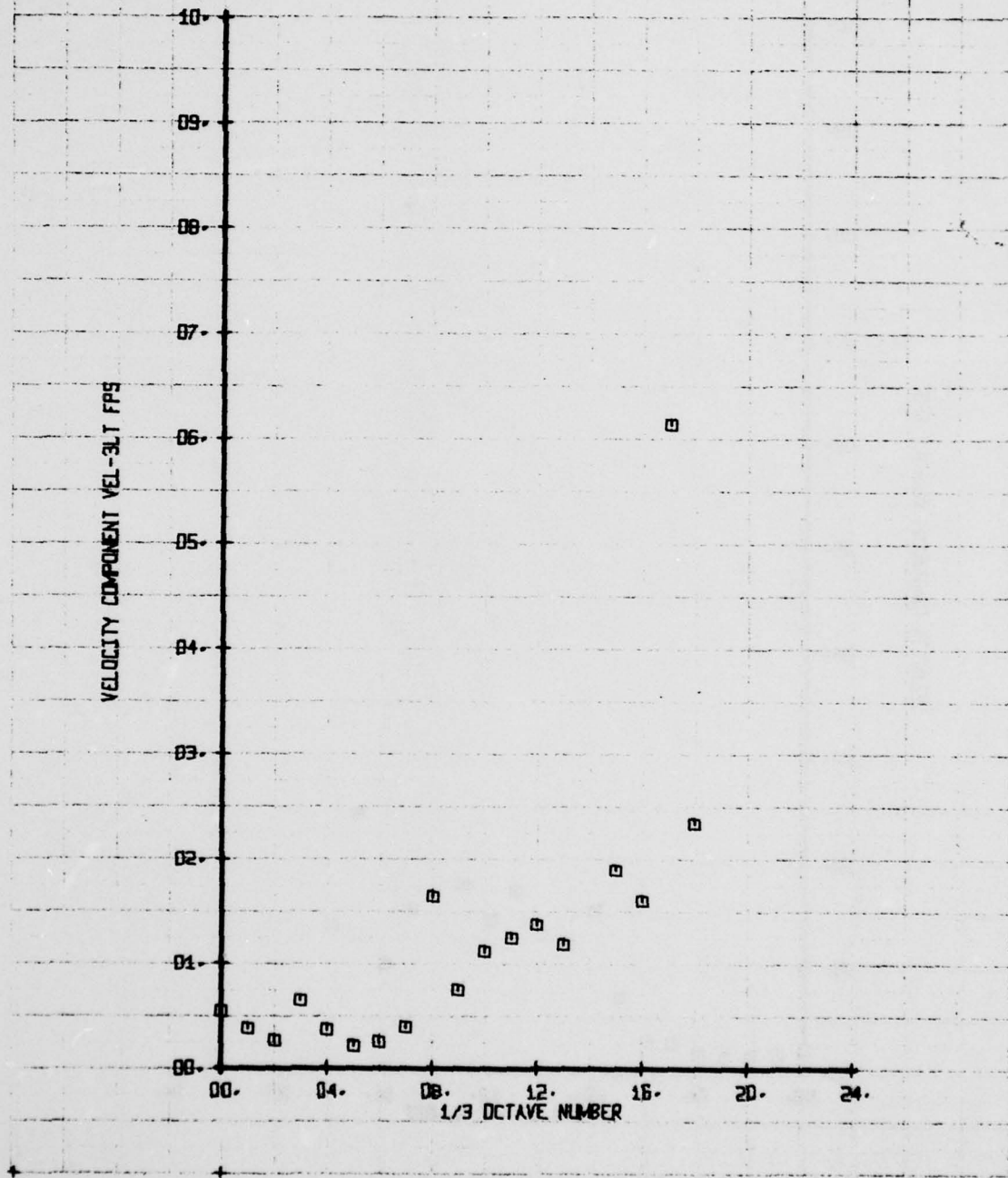
LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT





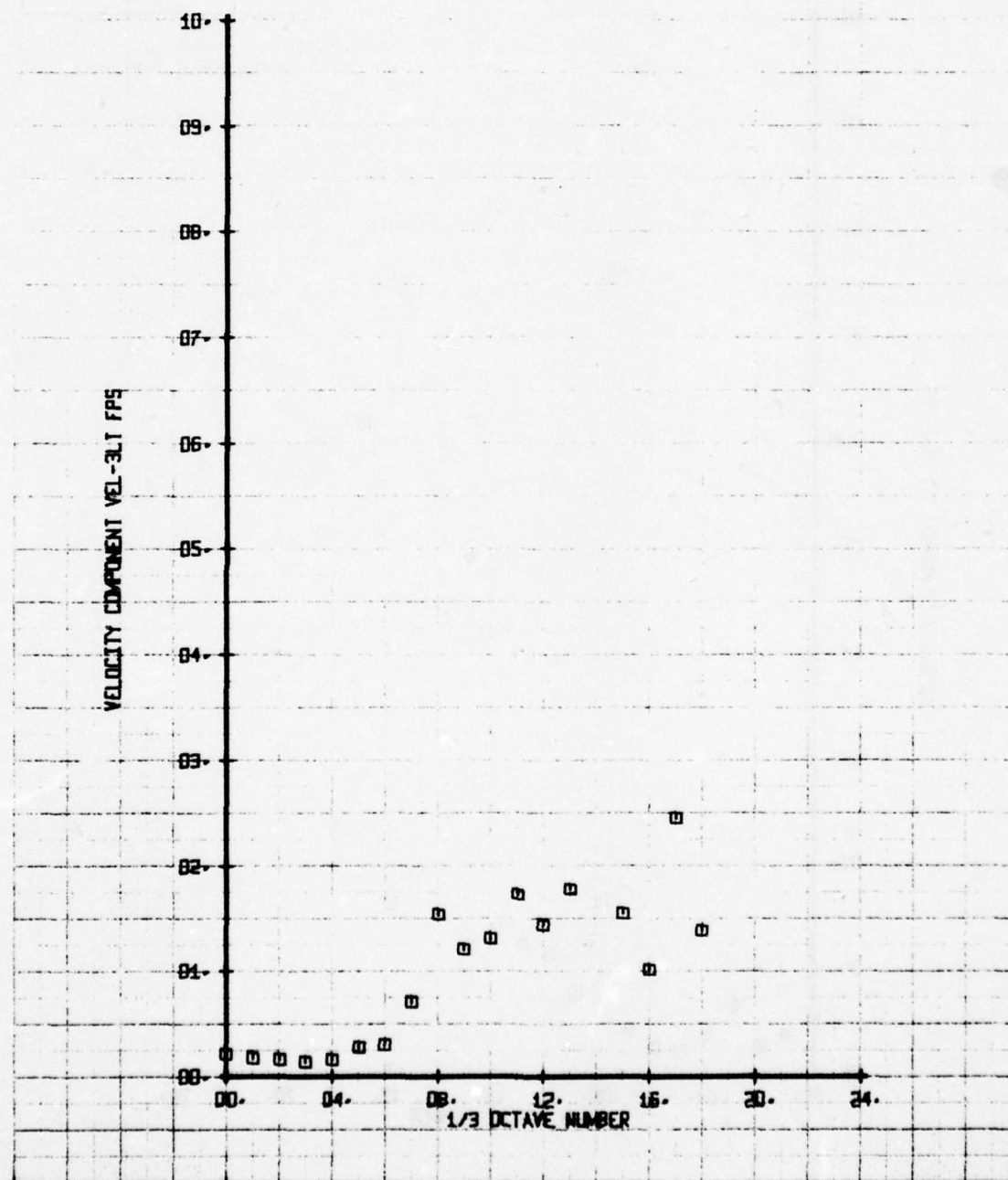
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 6

SYM CH: PARAMETER  
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 900 FPM CLIMB  
RUN 135 TP 8

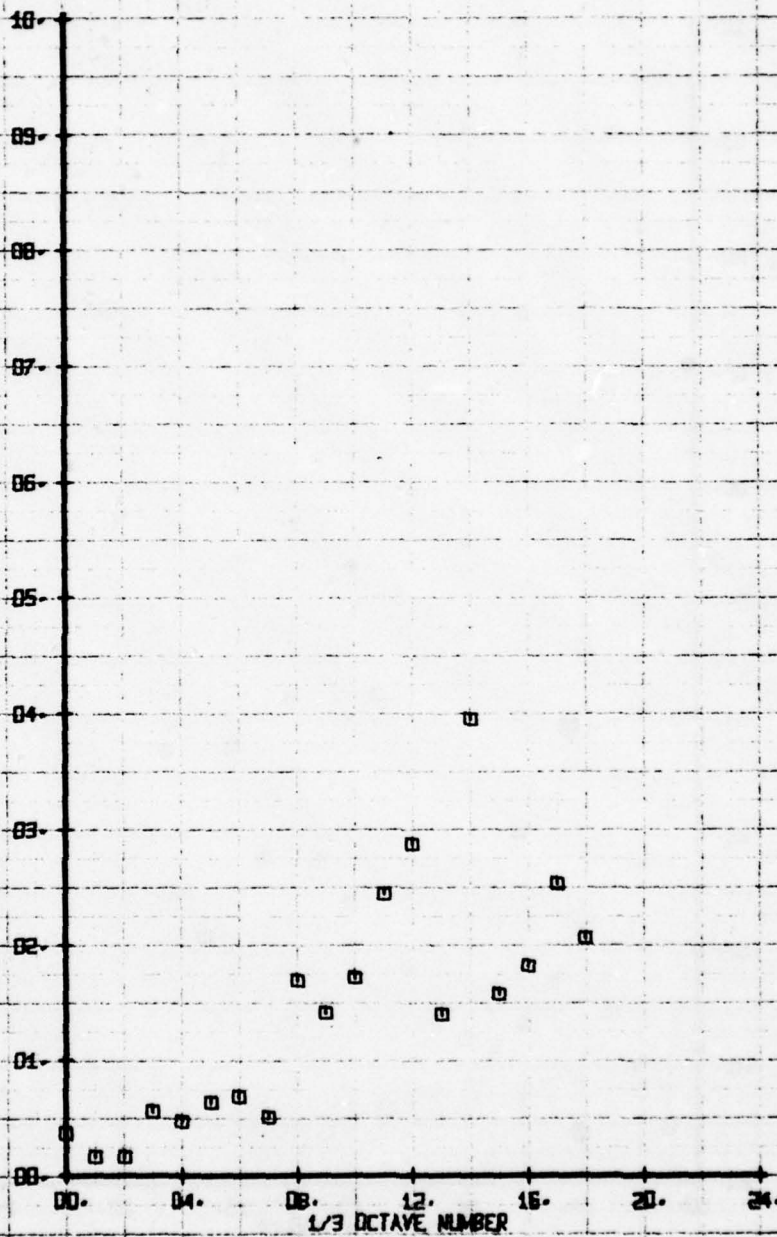
LEGEND  
SYM CH PARAMETER  
□ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE COMET6. 900 RPM CLIMB  
 RUN 135 TP 10

SYM CH PARAMETER  
 □ 70 VEL-3LT

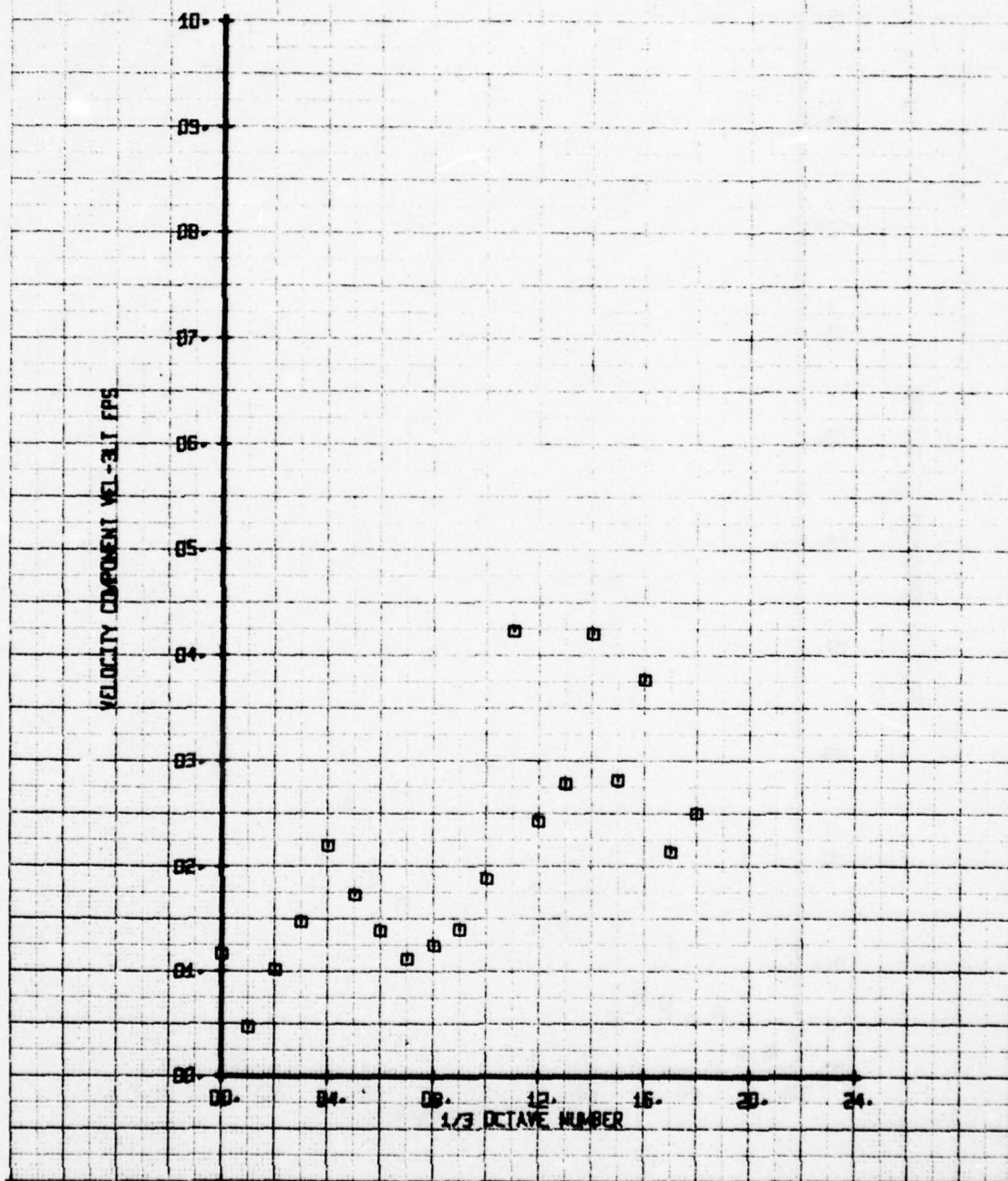
VELOCITY COMPONENT VEL-3LT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 FPM CLIMB  
 RUN 135 TP 12

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT

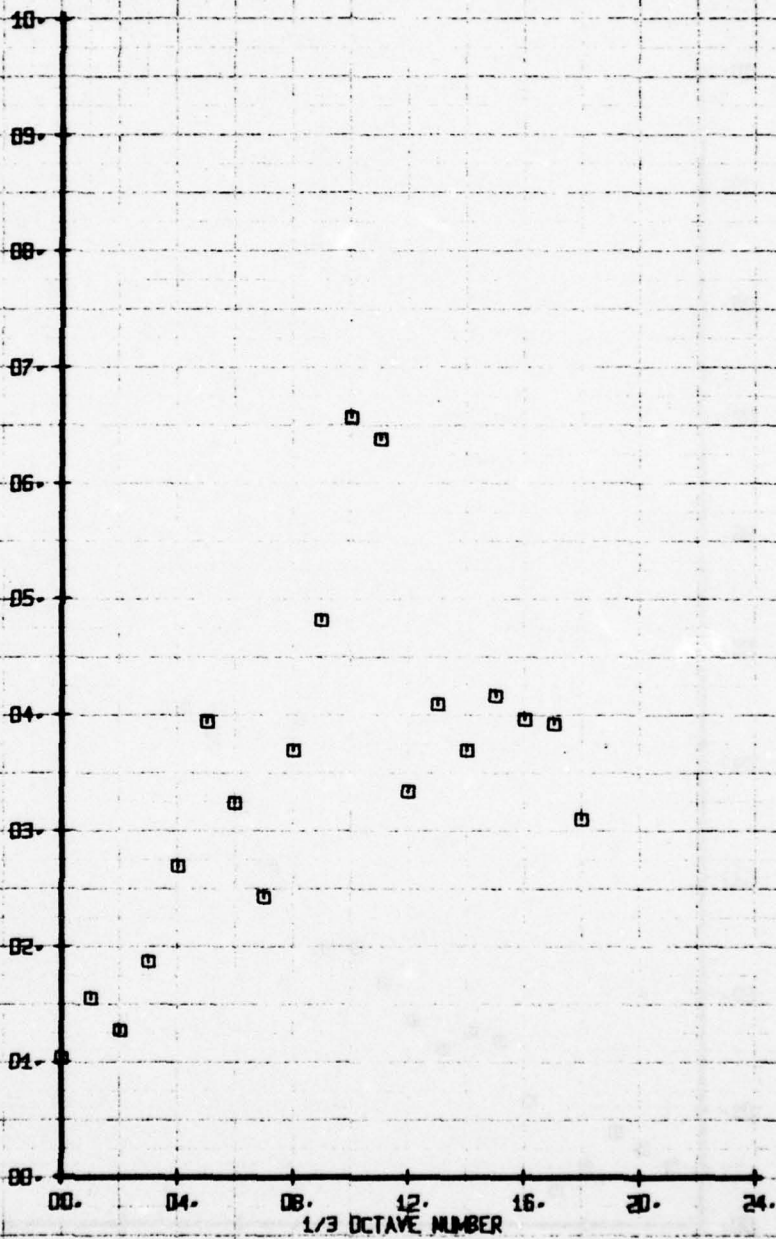


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 900 RPM CLIMB  
 RUN 135 TP 14

SYM  
 □

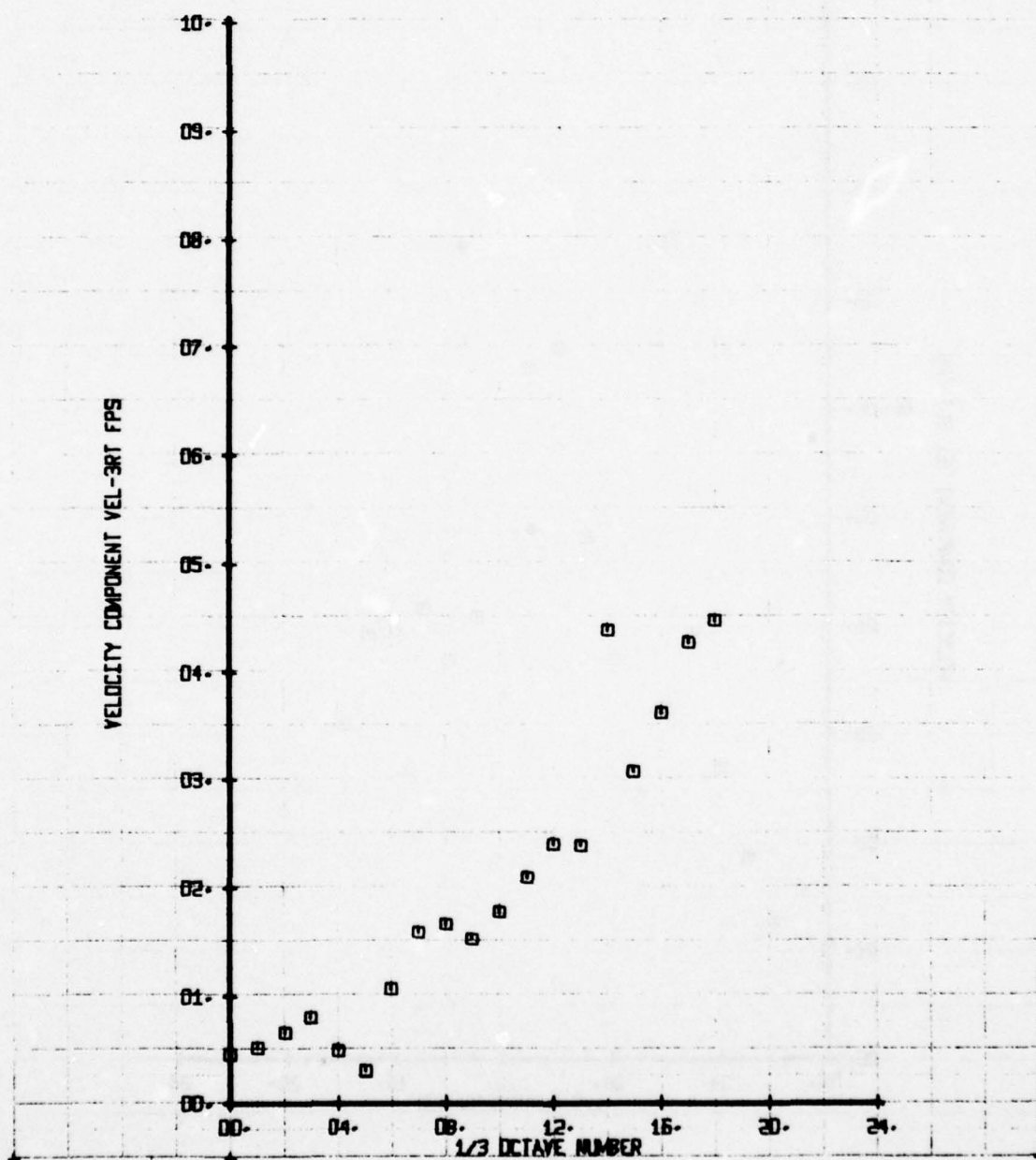
LEGEND  
 CH. 70  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 2

LEGEND		
SYM	CH	PARAMETER
□	71	VEL-3RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG- 800 FPM DESCENT

RUN 136 TP 4

SYM

□

CH

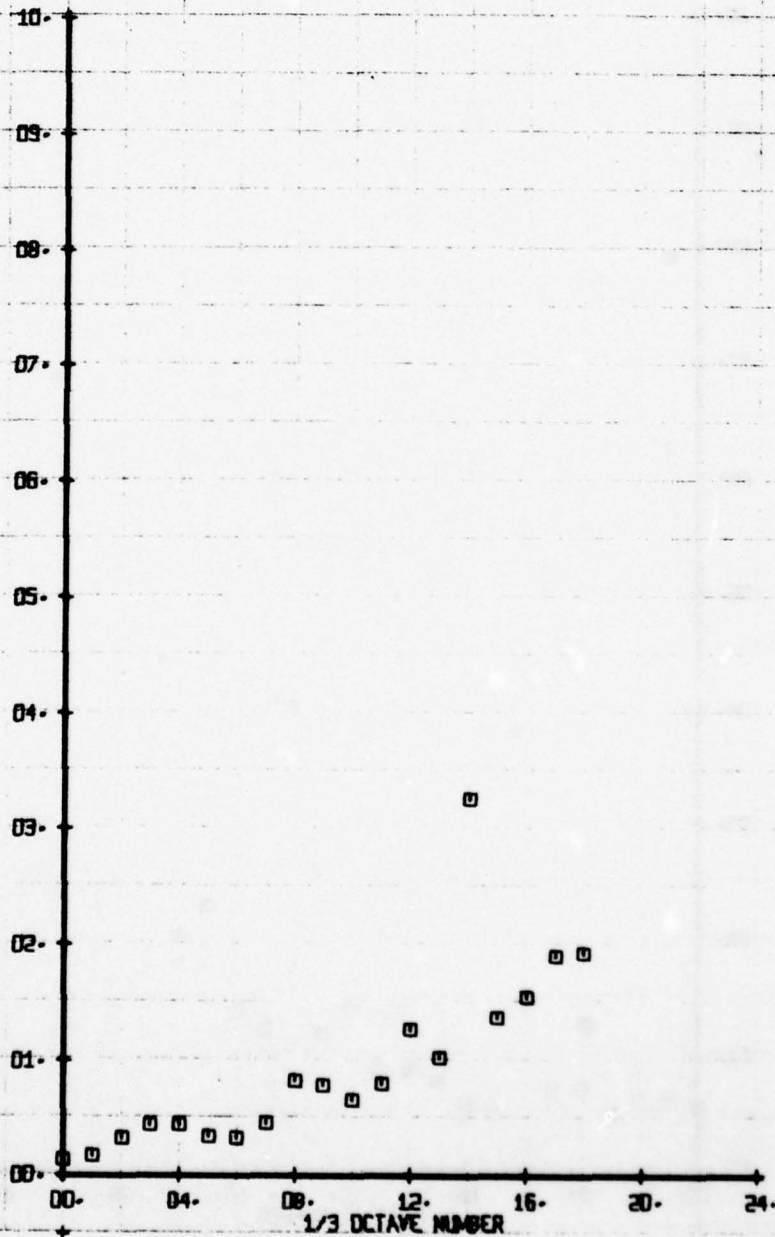
71

LEGEND

PARAMETER

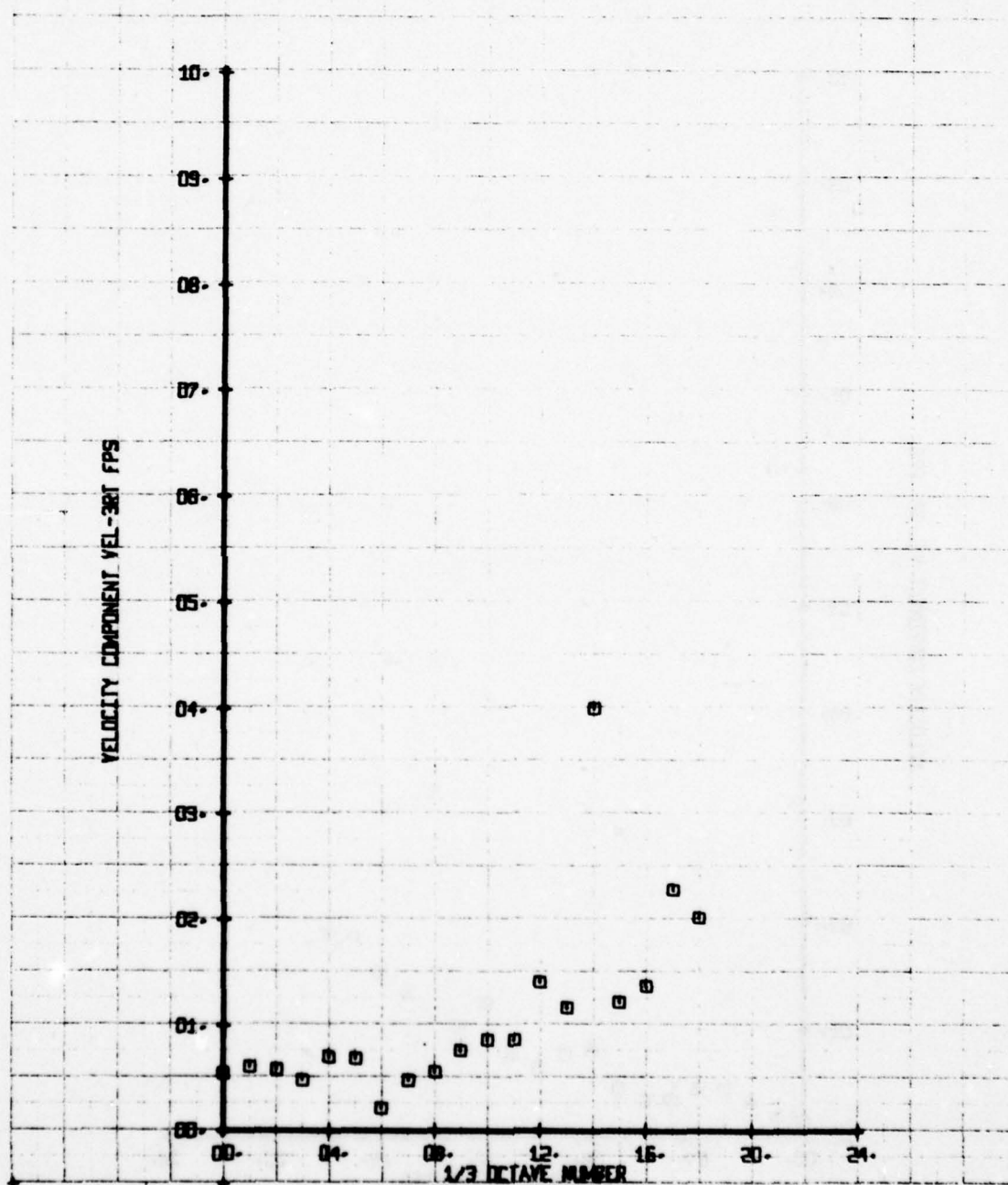
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 6

LEGEND  
SYM CH PARAMETER  
O 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG- 800 FPM DESCENT

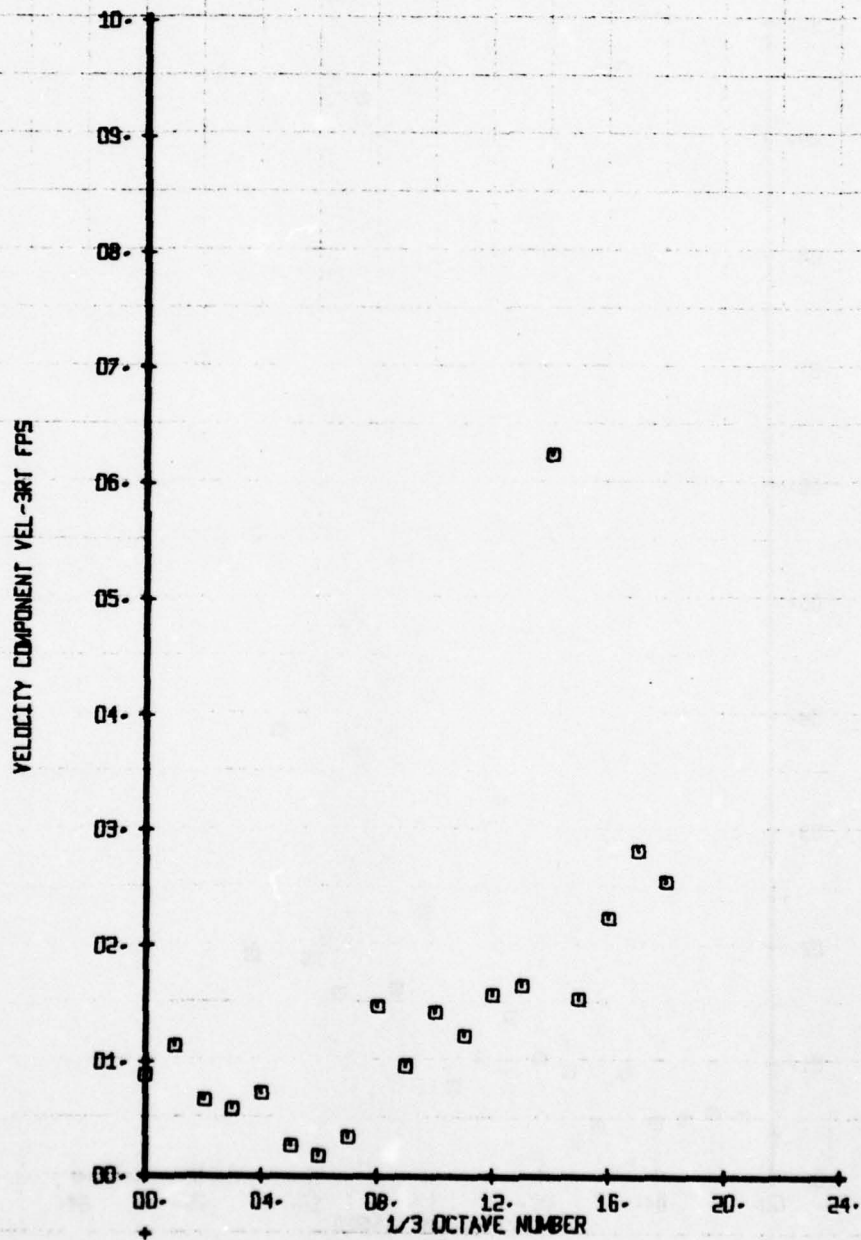
RUN 136 TP B

SYM  
□

CH  
71

LEGEND

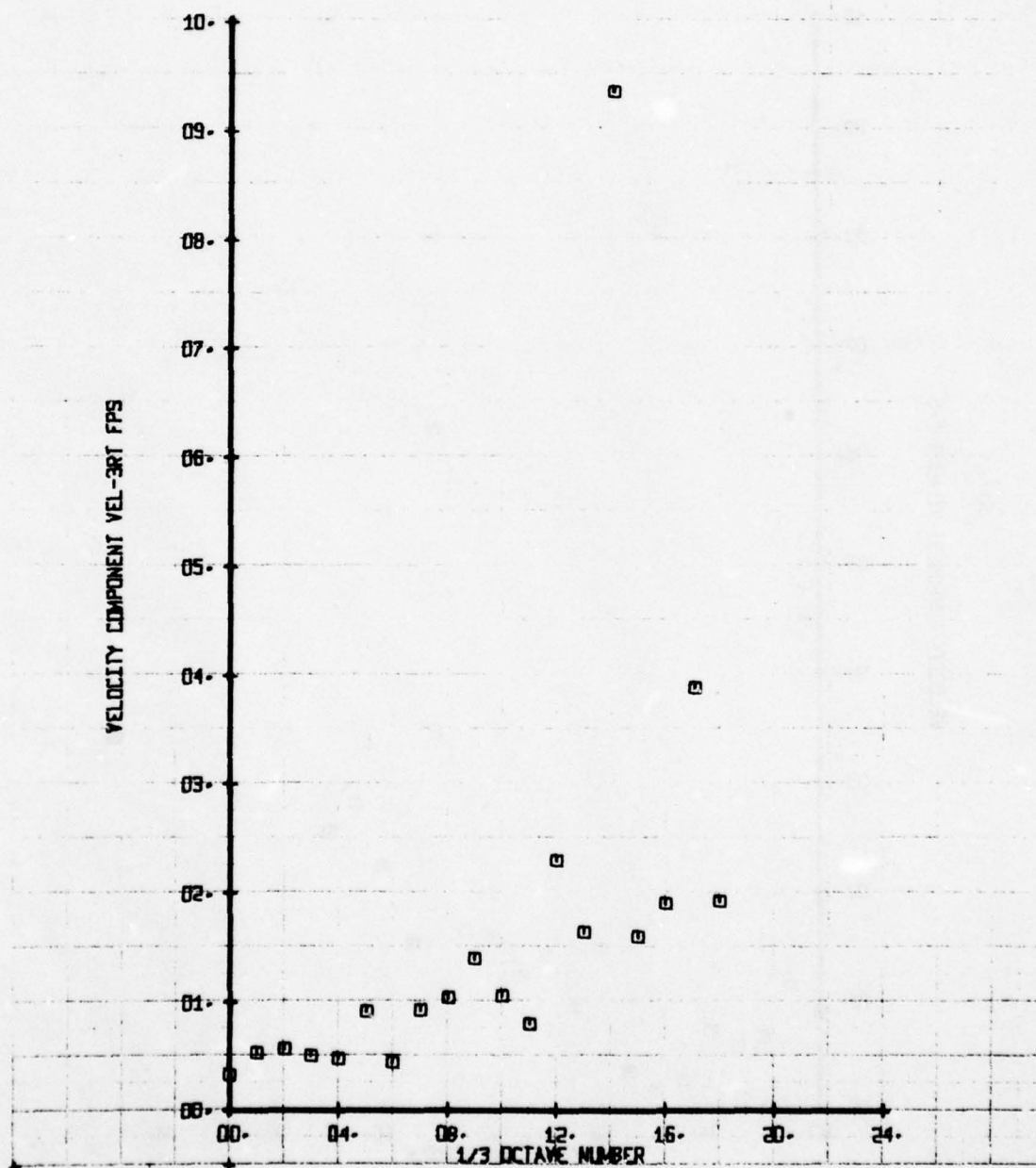
PARAMETER  
VEL-3RT





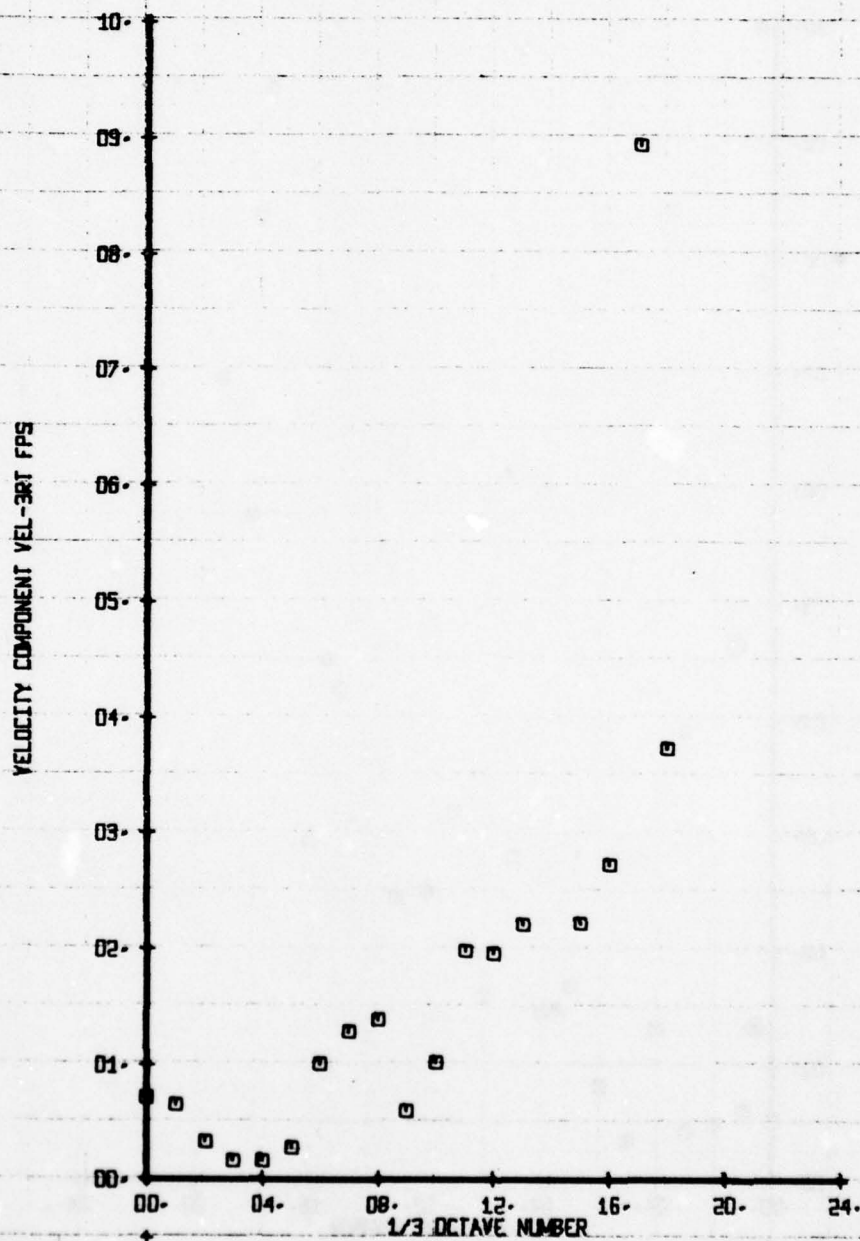
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 10

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 12

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG- 800-FPM DESCENT

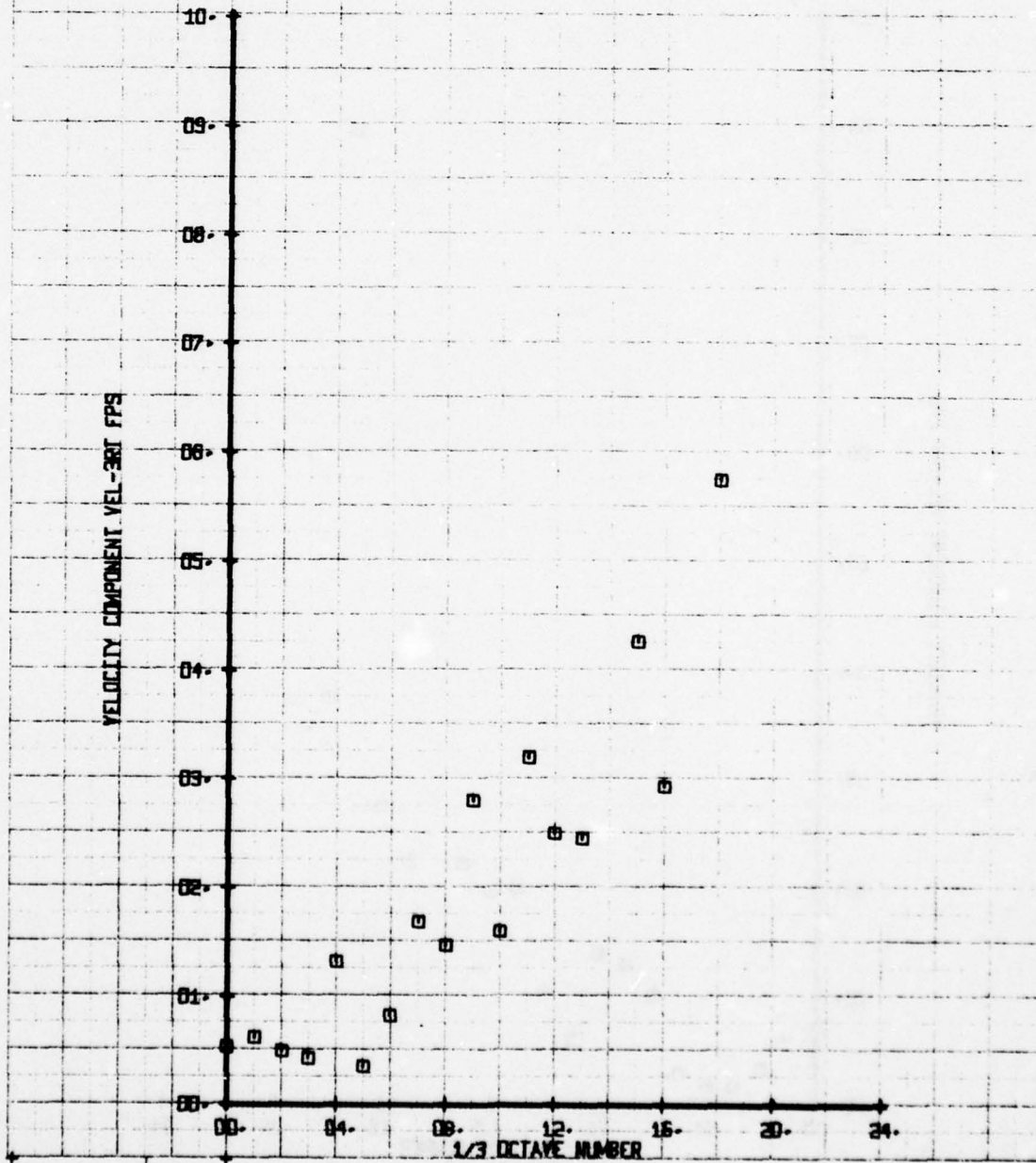
RUN 136 TP 14

SYM  
□

CH  
71

## LEGEND

PARAMETER  
VEL-3RT





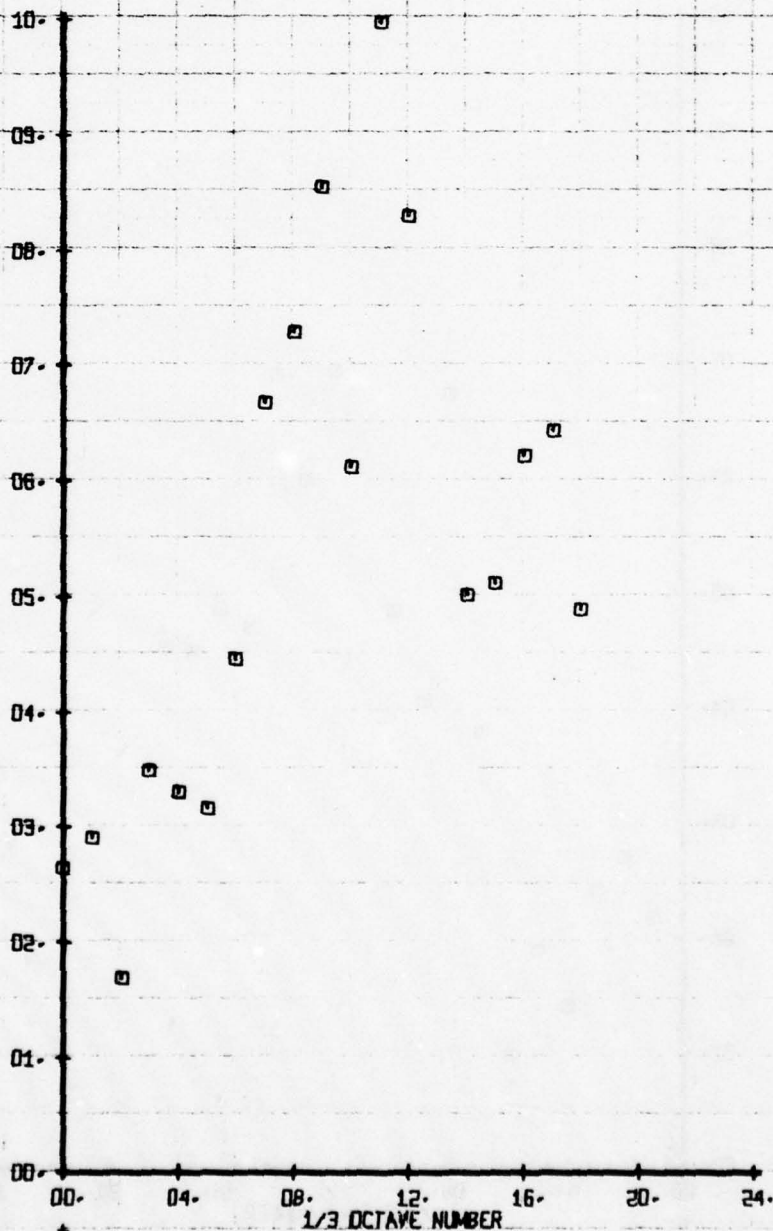
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 17

SYM  
□

CH  
71

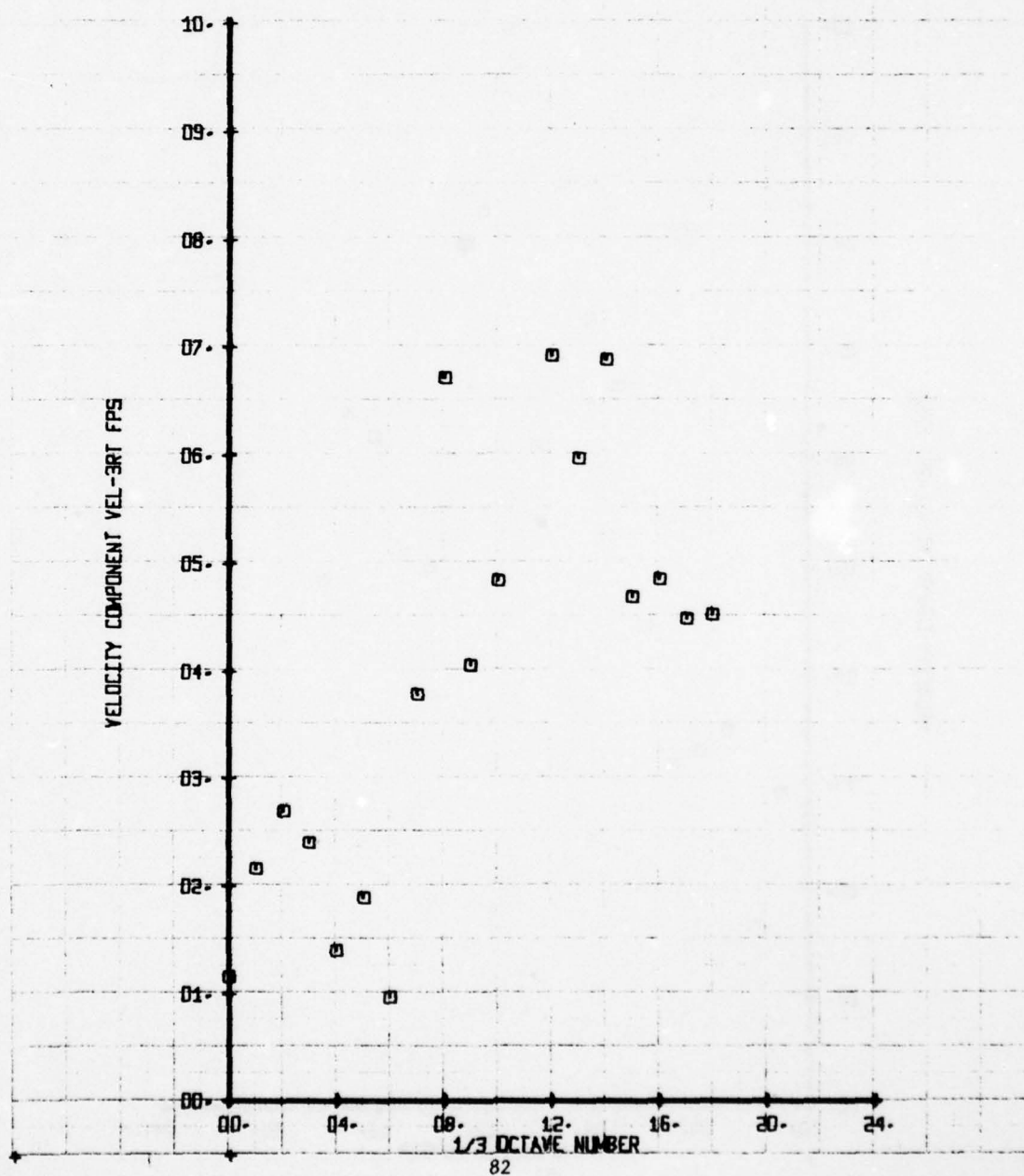
LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 18

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT

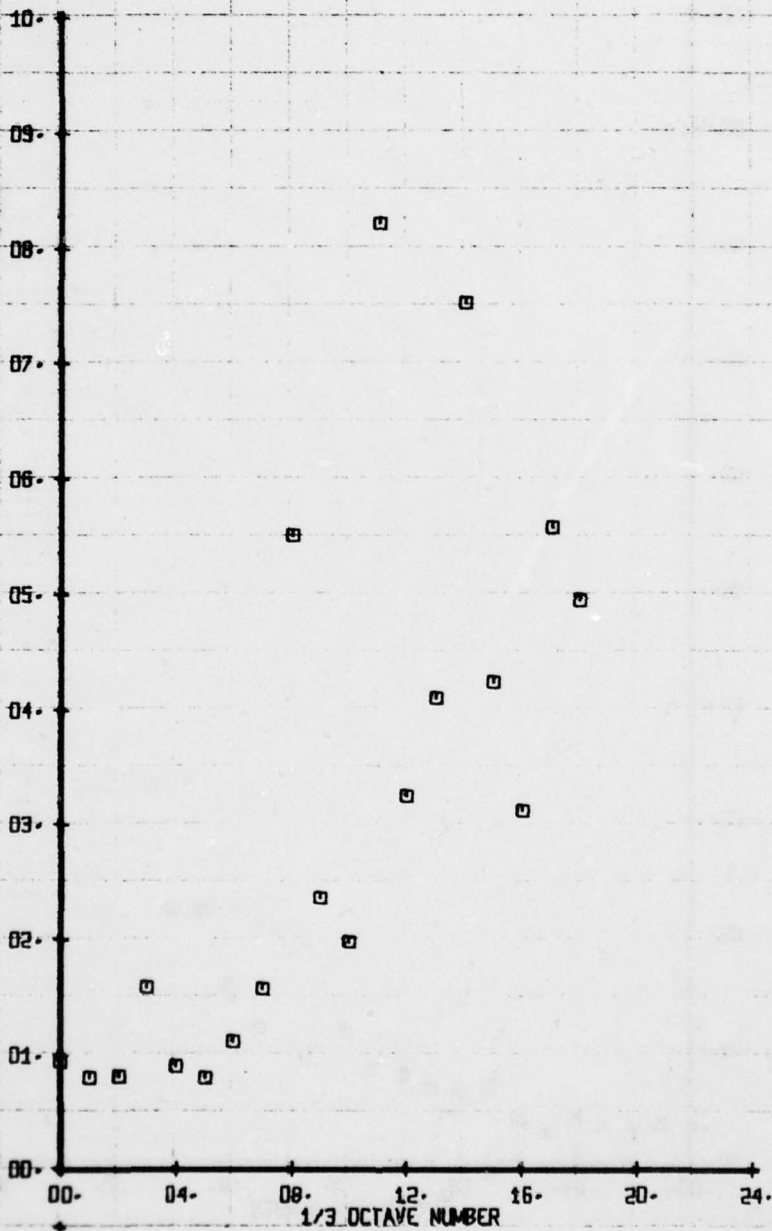


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 19

SYM  
□

LEGEND  
CH 71  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

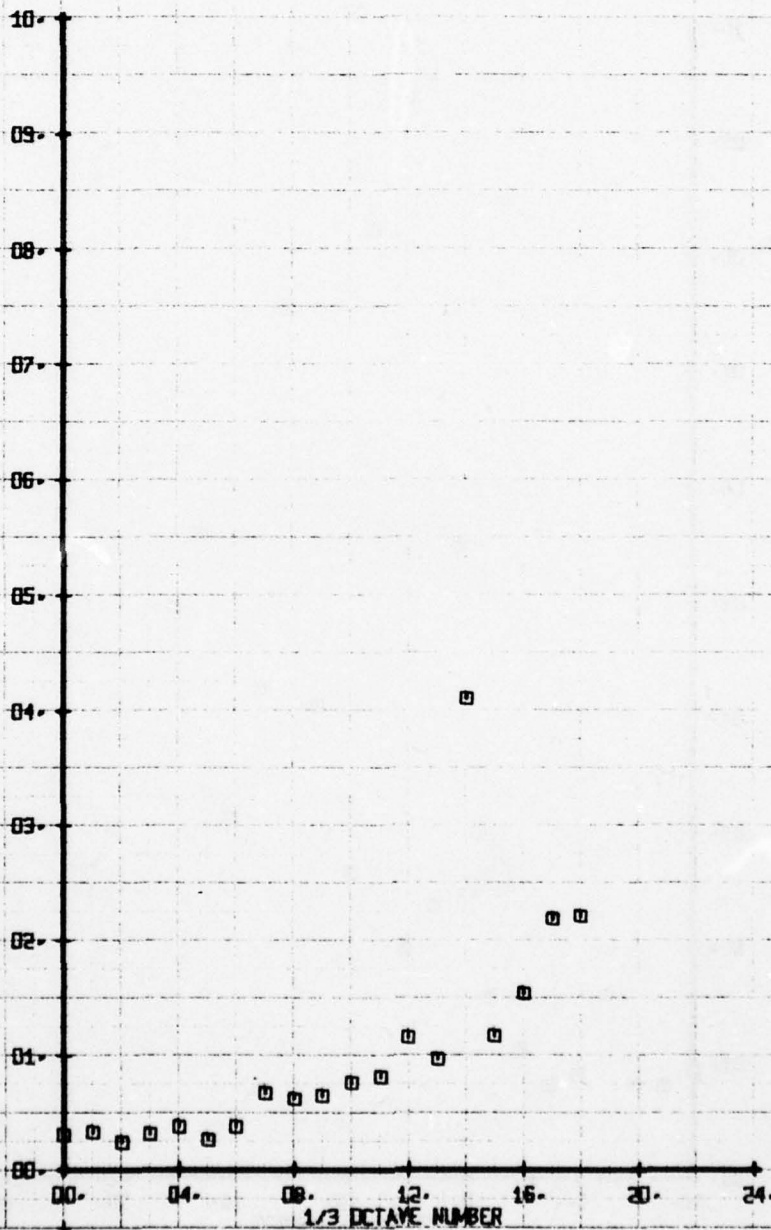




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 2

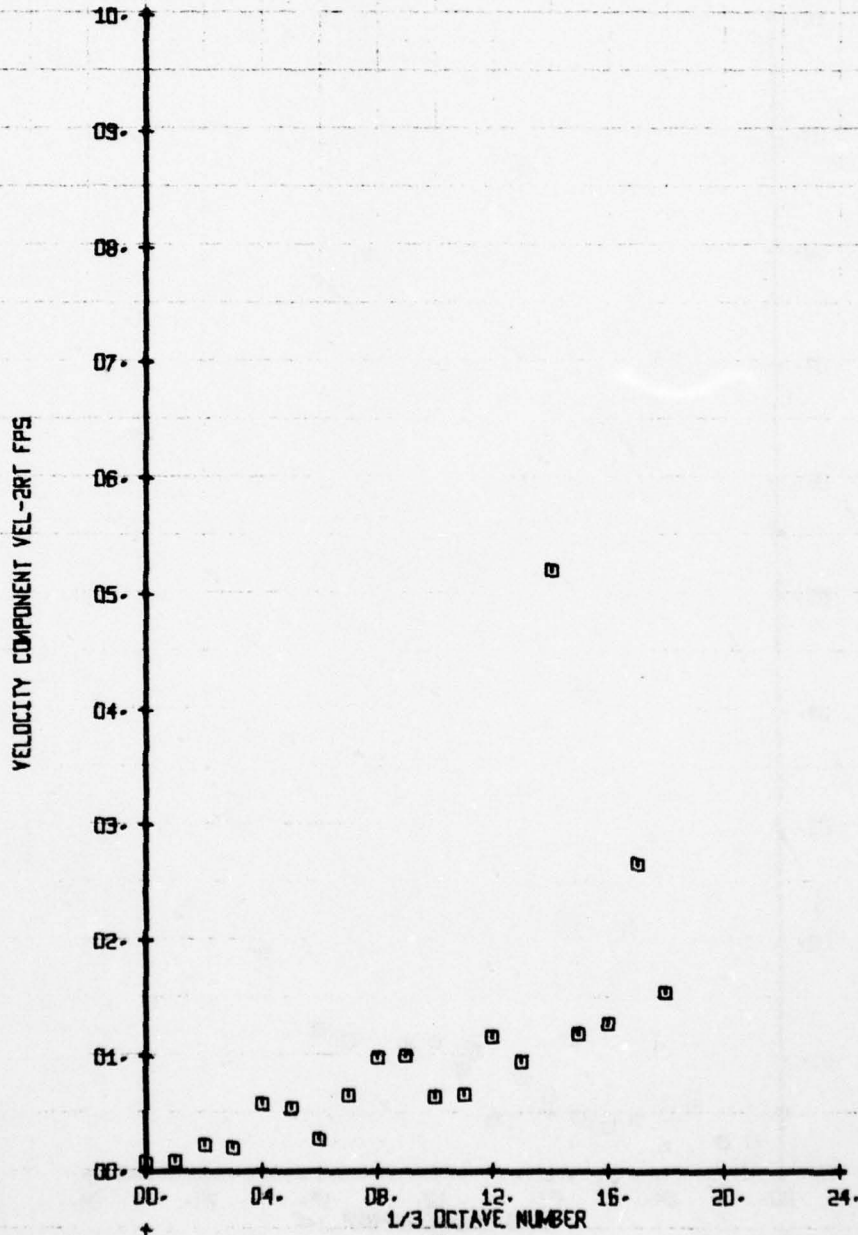
SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



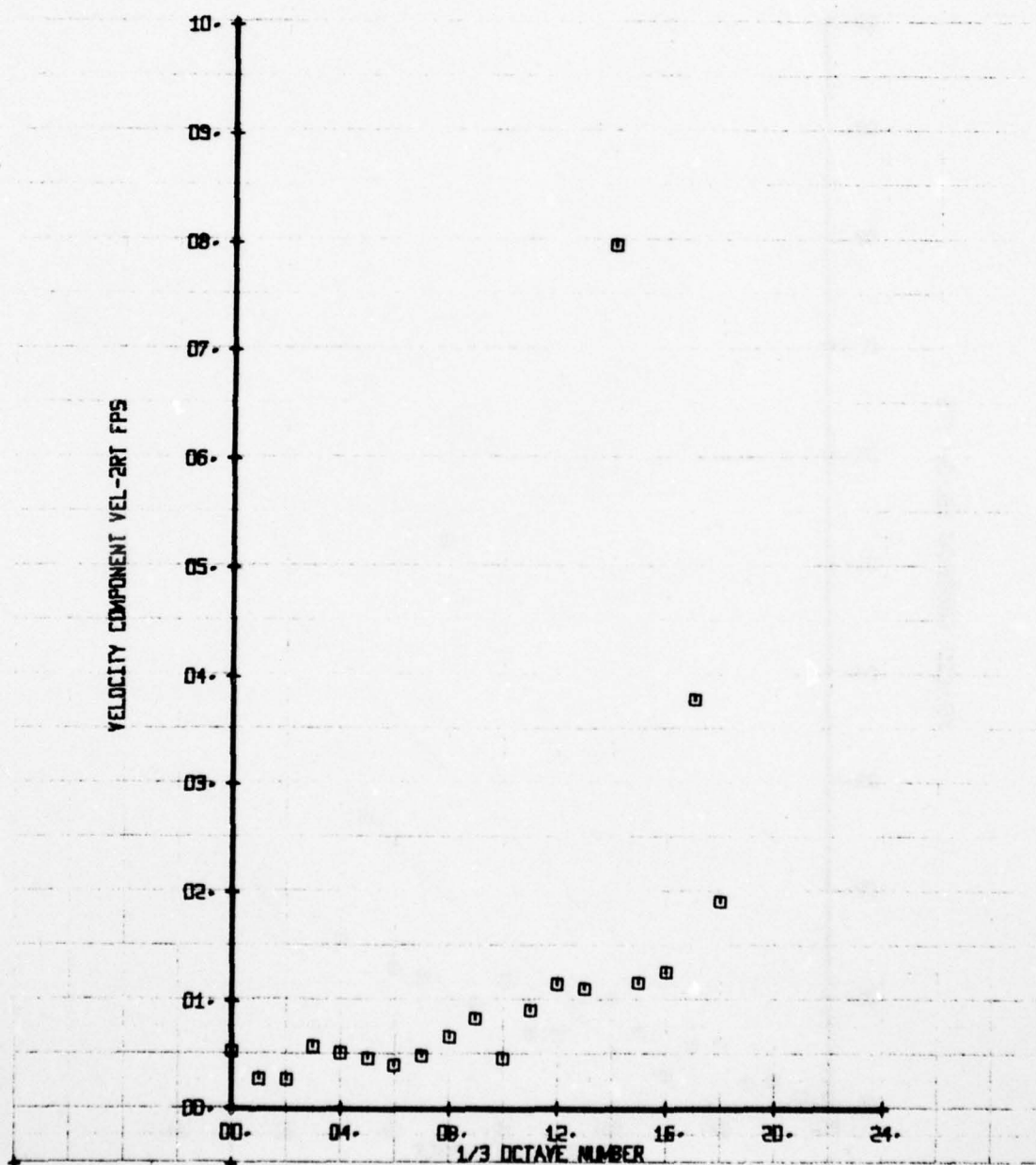
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800 FPM DESCENT  
 RUN 136 TP 4

LEGEND	
SYM	PARAMETER
□	VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 6

LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT





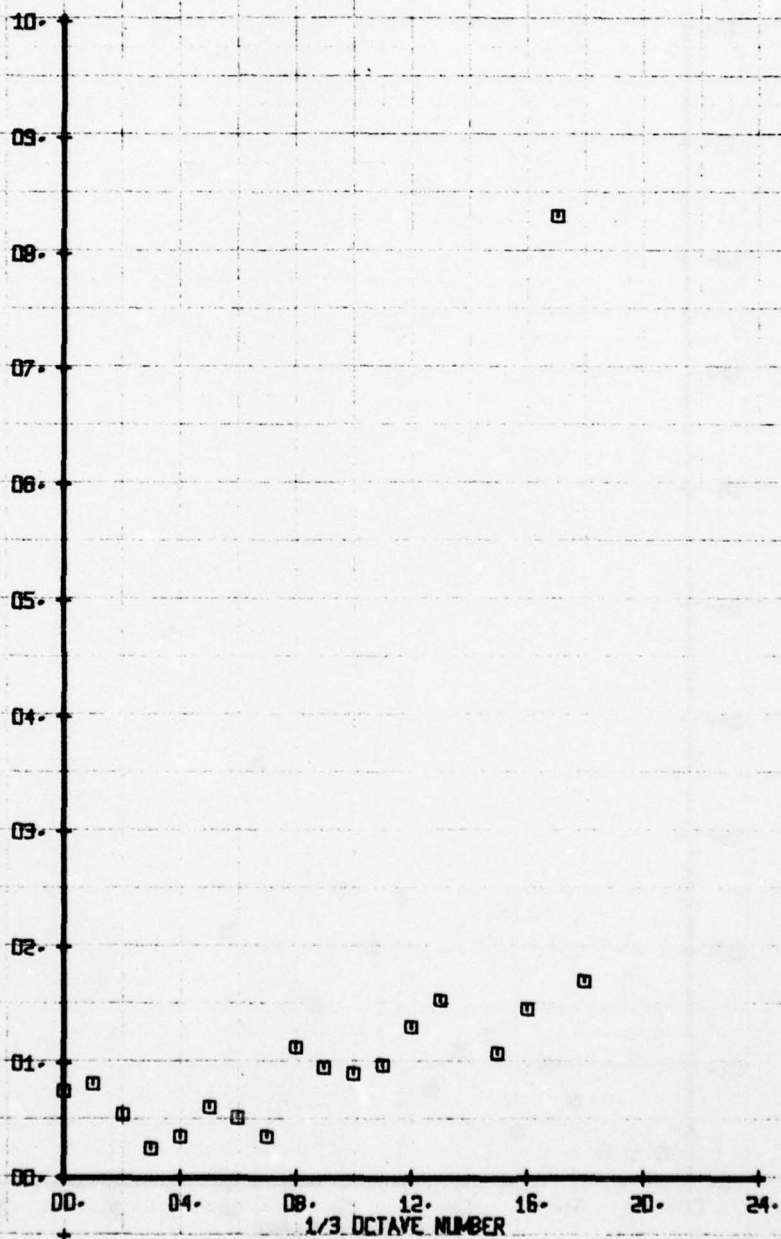
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 8

SYM  
 □

CH  
 75

LEGEND  
 PARAMETER  
 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

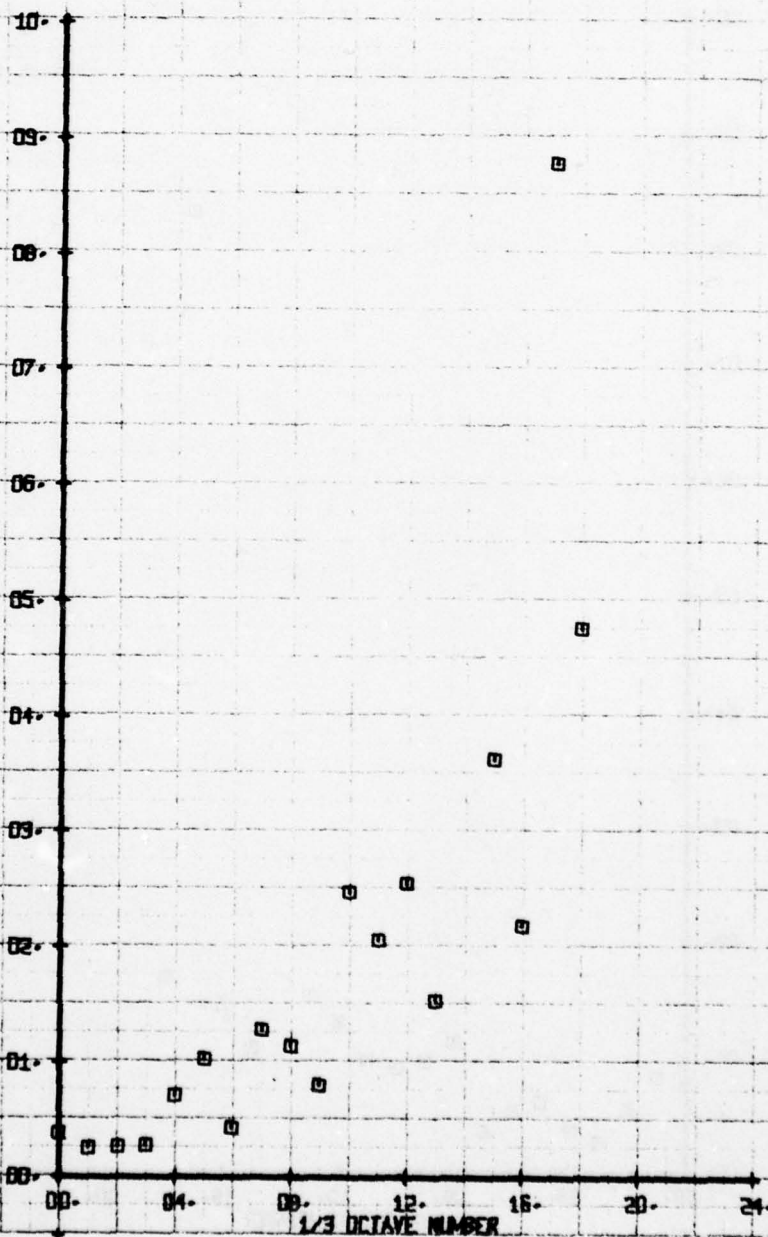
BASE CONFIG- 800 FPM DESCENT

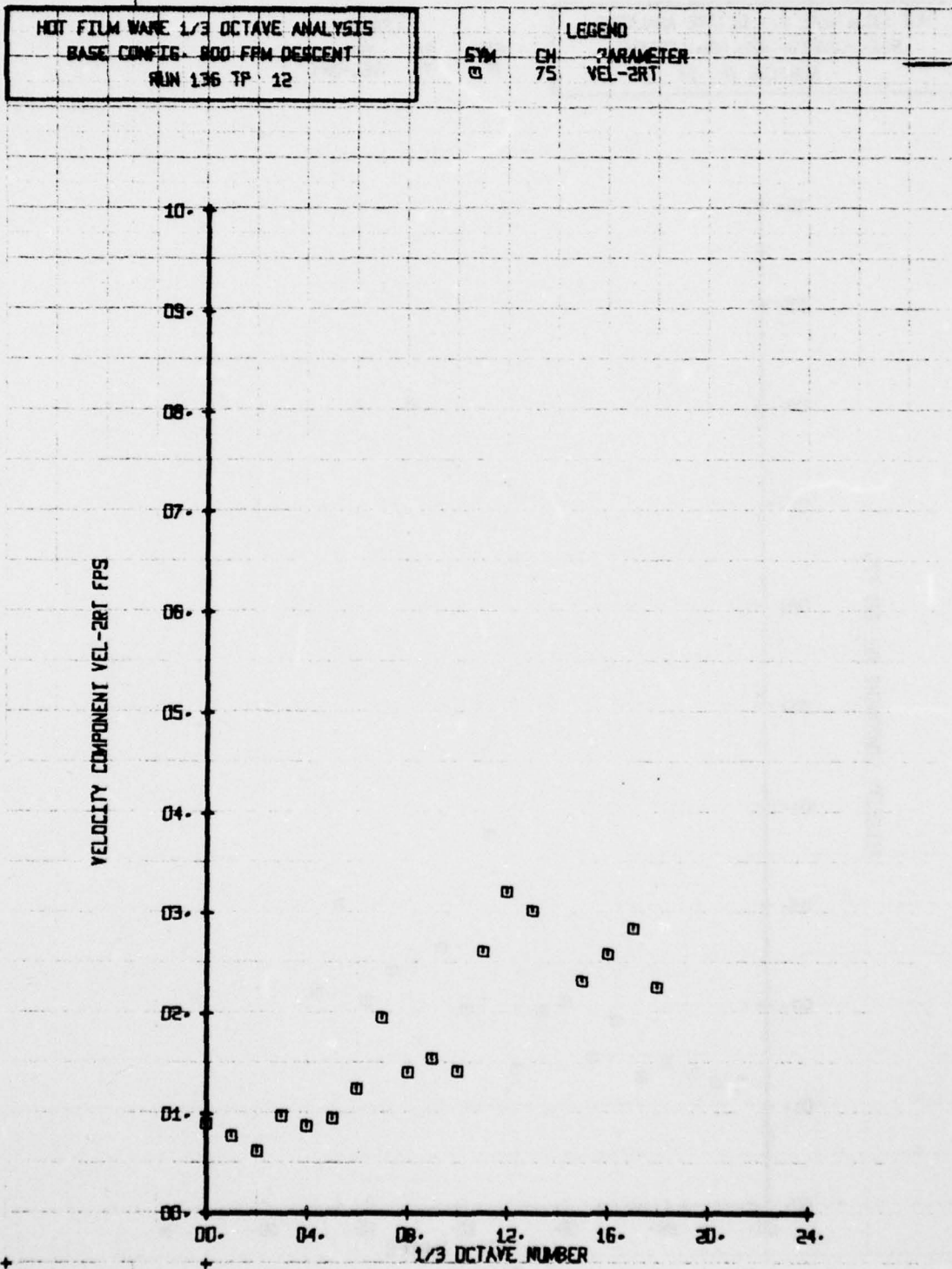
RUN 136 TP 10

## LEGEND

SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS

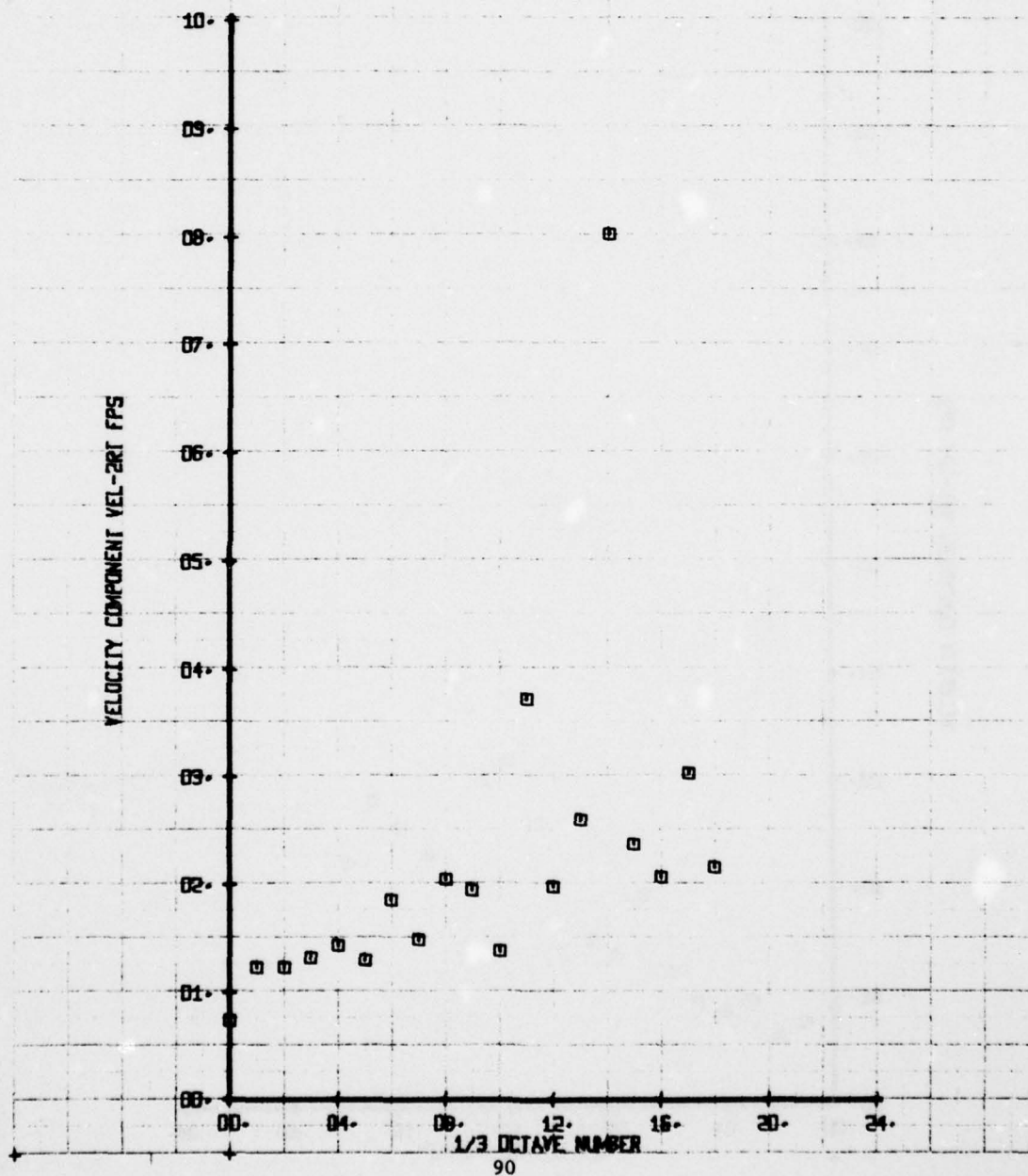






HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 14

LEGEND  
SYM CH PARAMETER  
□ 75 VEL-2RT

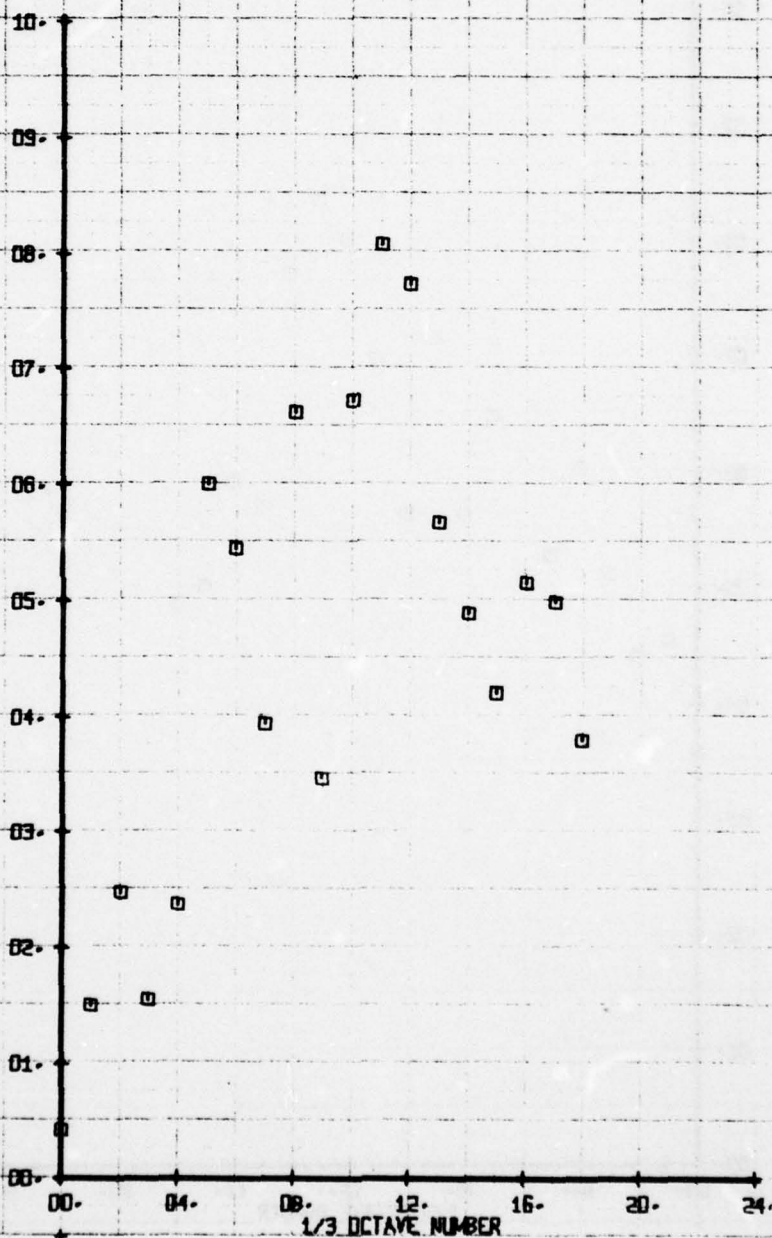


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 17

SYM  
□

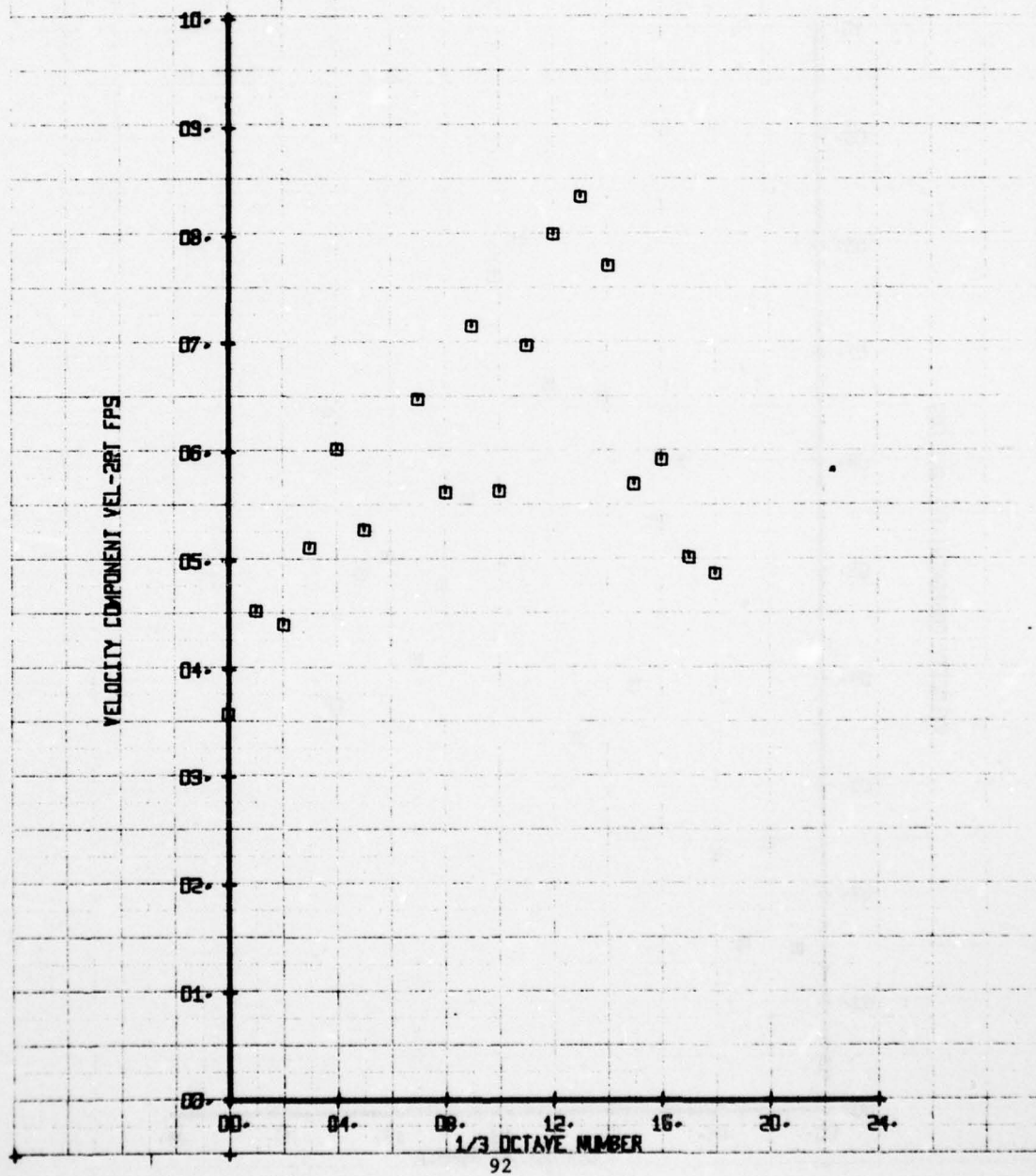
LEGEND  
CH 75  
PARAMETER  
VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 1B

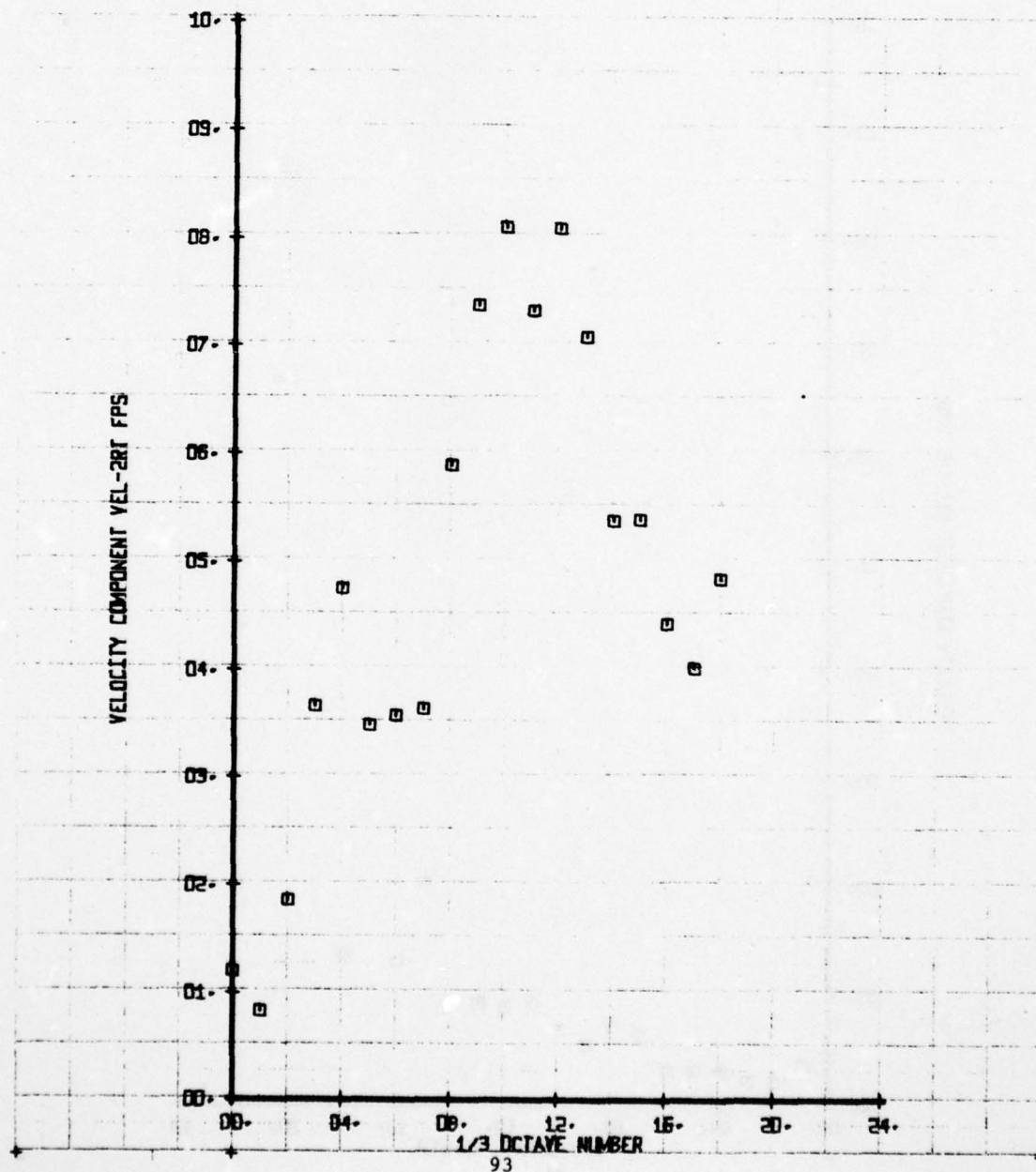
LEGEND  
SYM CH PARAMETER  
□ 75 VEL-2RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 19

LEGEND  
SYM CH PARAMETER  
□ 75 VEL-2RT

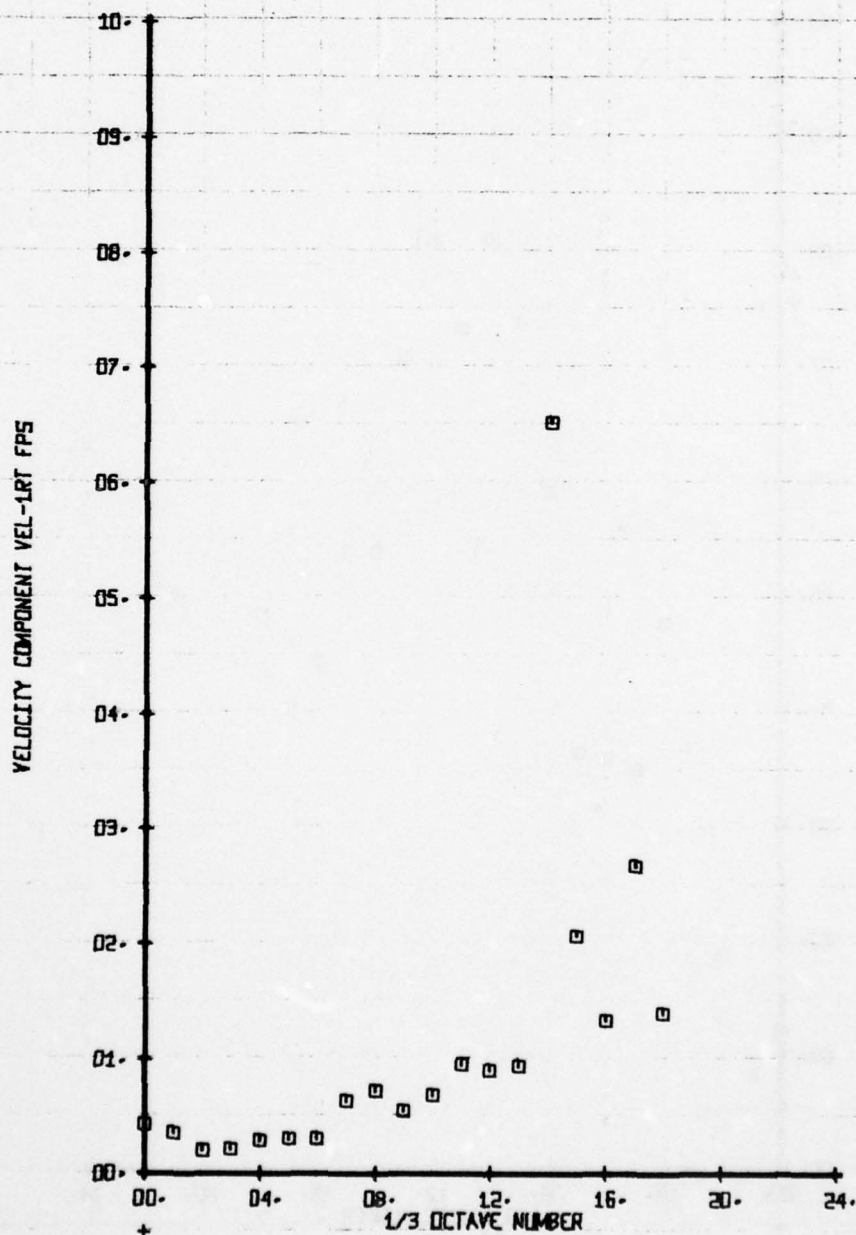


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 2

SYM  
 □

CH  
 74

LEGEND  
 PARAMETER  
 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 4

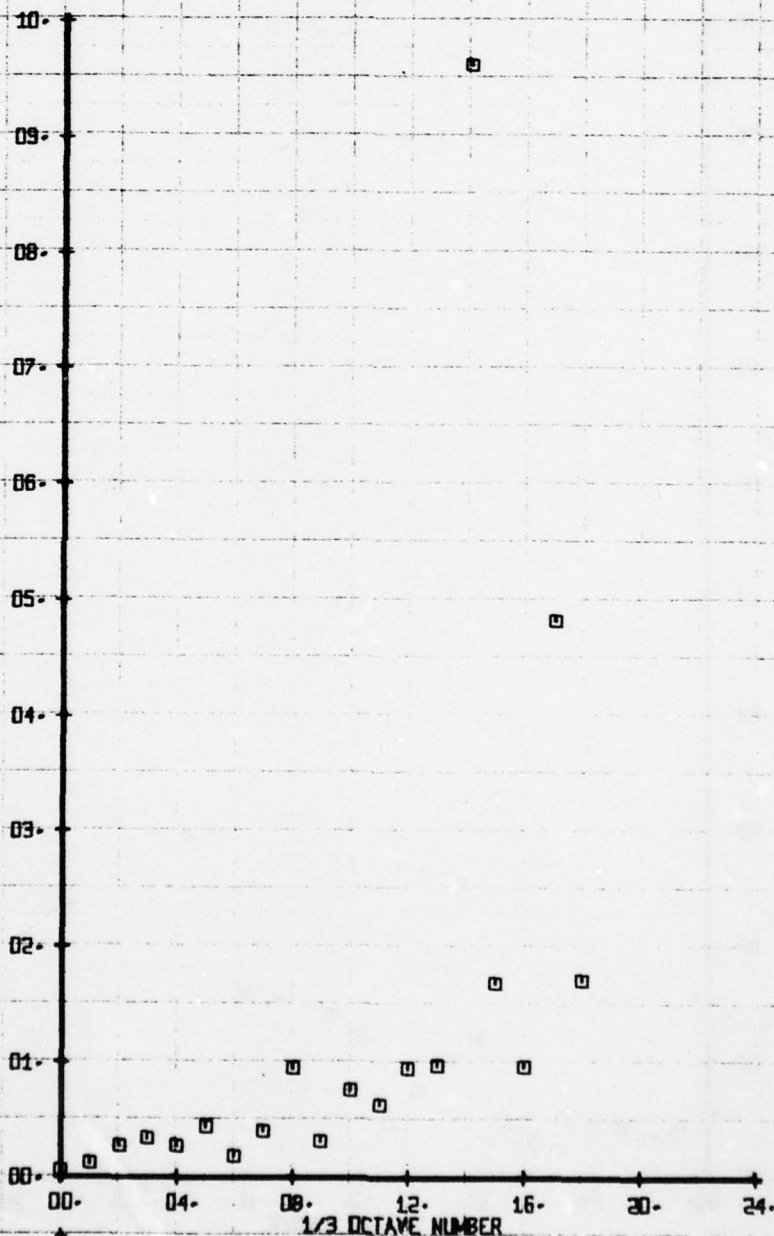
SYM  
 □

LEGEND

CH  
 74

PARAMETER  
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG- 800 FPM DESCENT

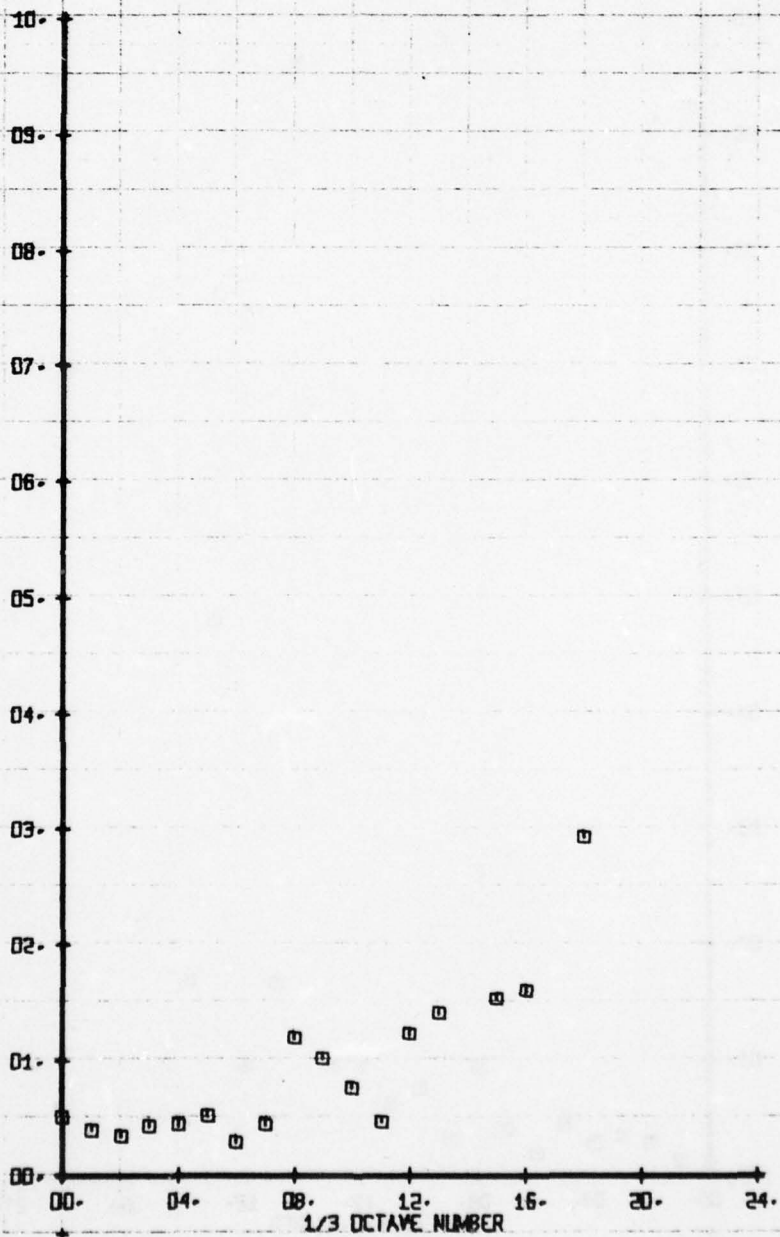
RUN 136 TP 6

SYM  
□

CH  
74

LEGEND  
PARAMETER  
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



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BOEING VERTOL CO PHILADELPHIA PA

F/G 1/3

INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONFI--ETC(U)

SEP 78 P F SHERIDAN

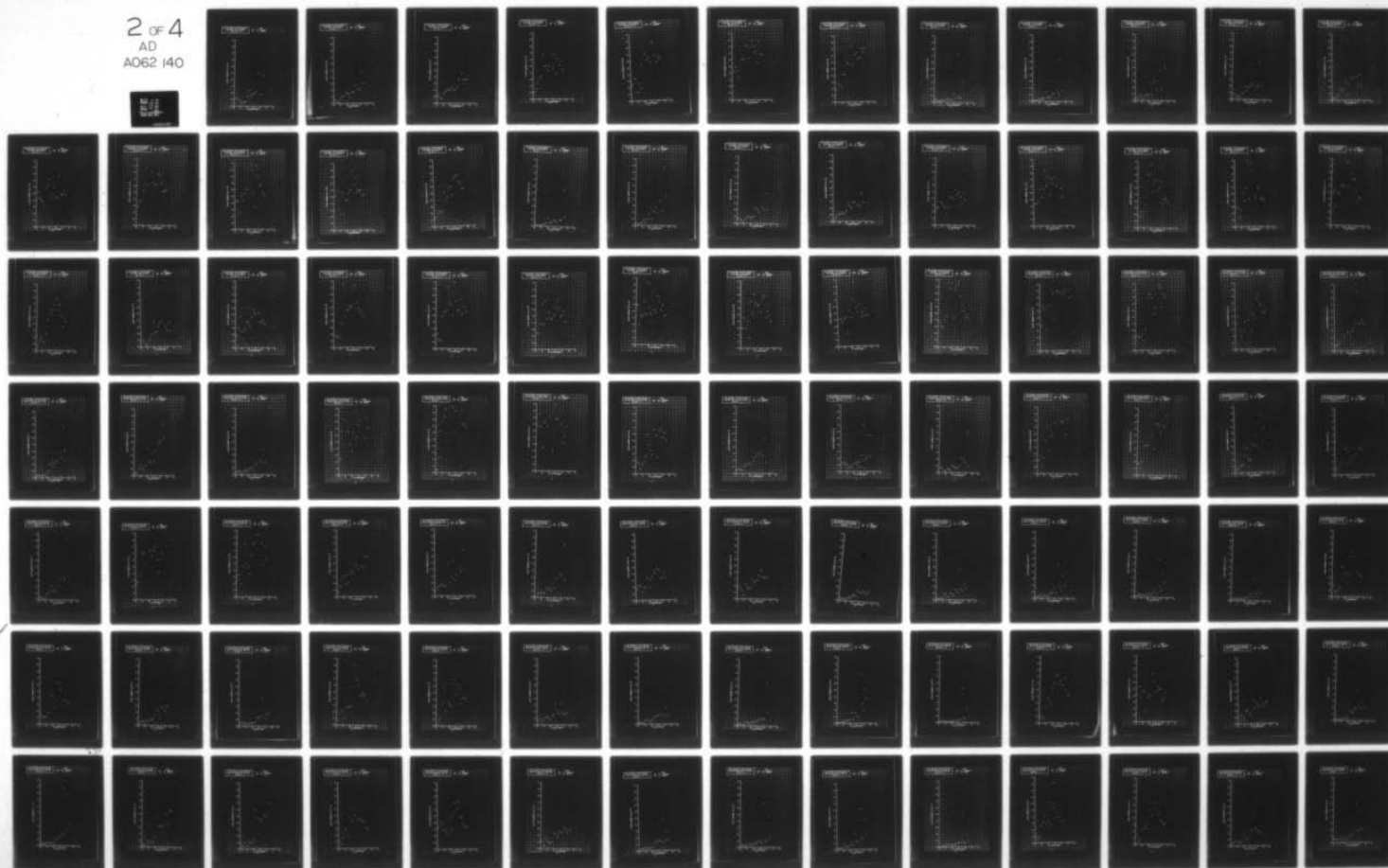
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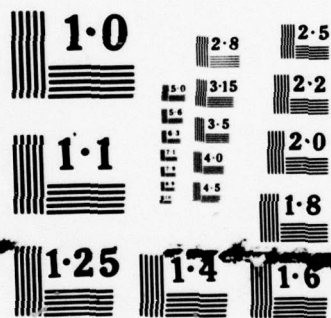
UNCLASSIFIED

USARTL-TR-78-23F-V-6-C

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2 OF 4  
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A062 140





NATIONAL BUREAU OF STANDARDS  
MICROCOPY RESOLUTION TEST CHART



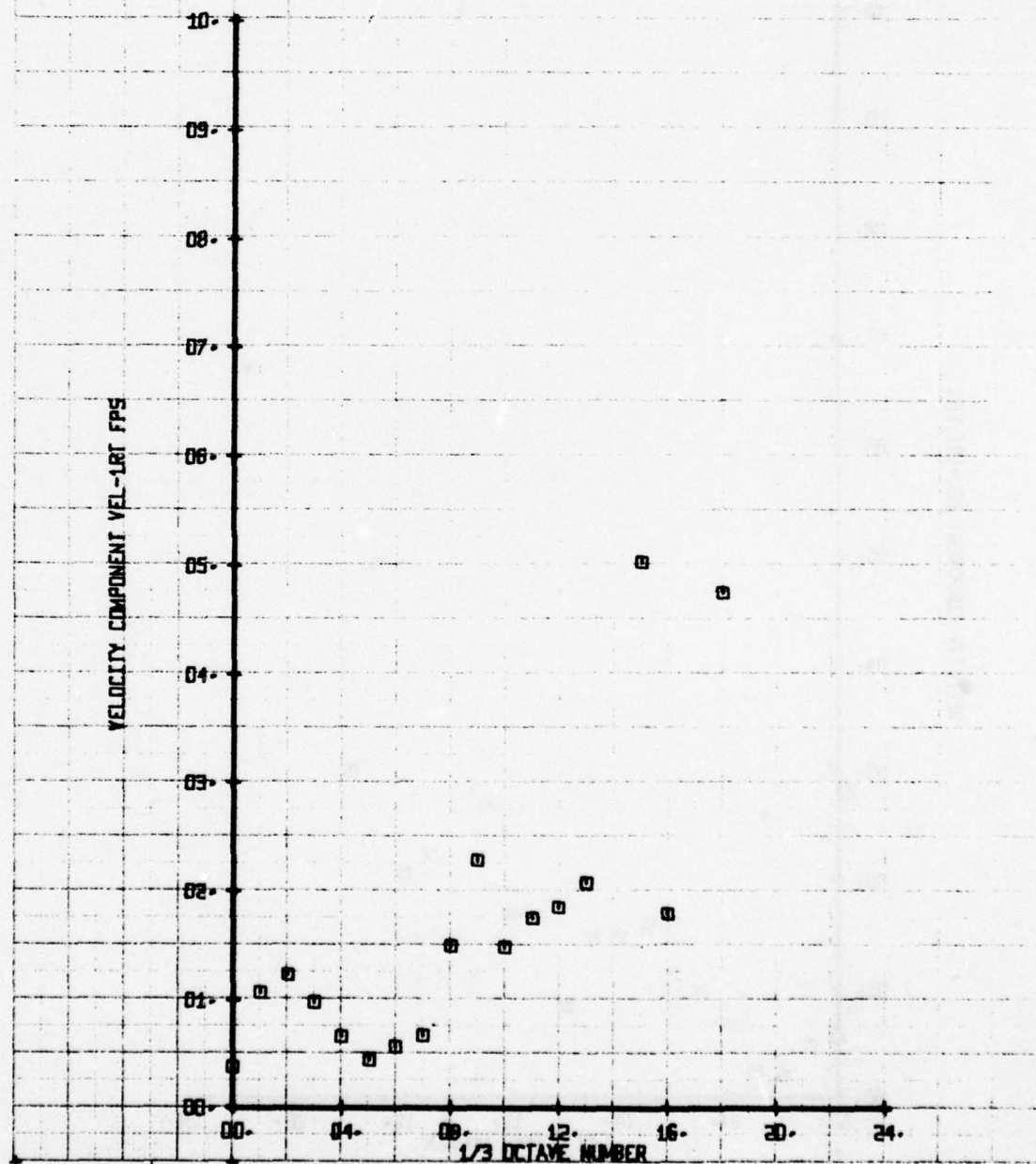
# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE CONFIG- 800 FPM DESCENT

RUN 136 TP 8

## LEGEND

SYM	CH	PARAMETER
□	74	VEL-1RT



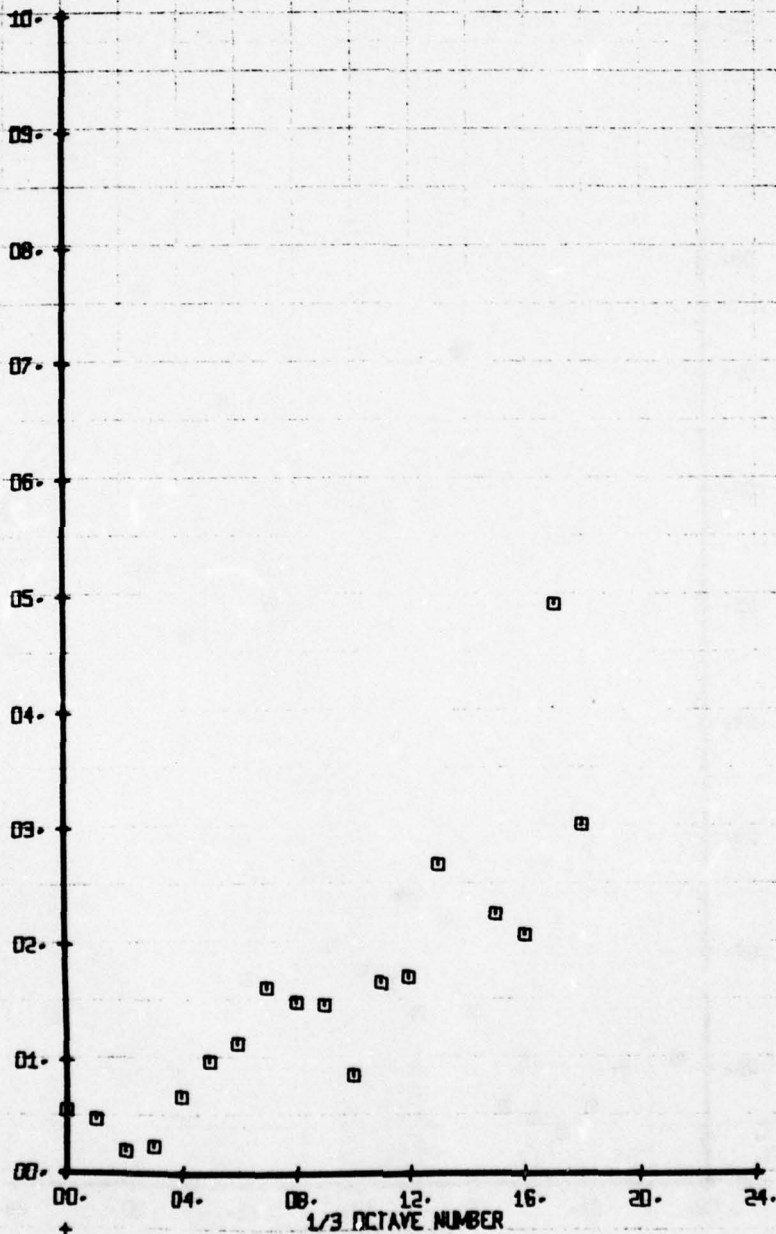
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 10

SYM  
□

CH  
74

LEGEND  
PARAMETER  
VEL-1RT

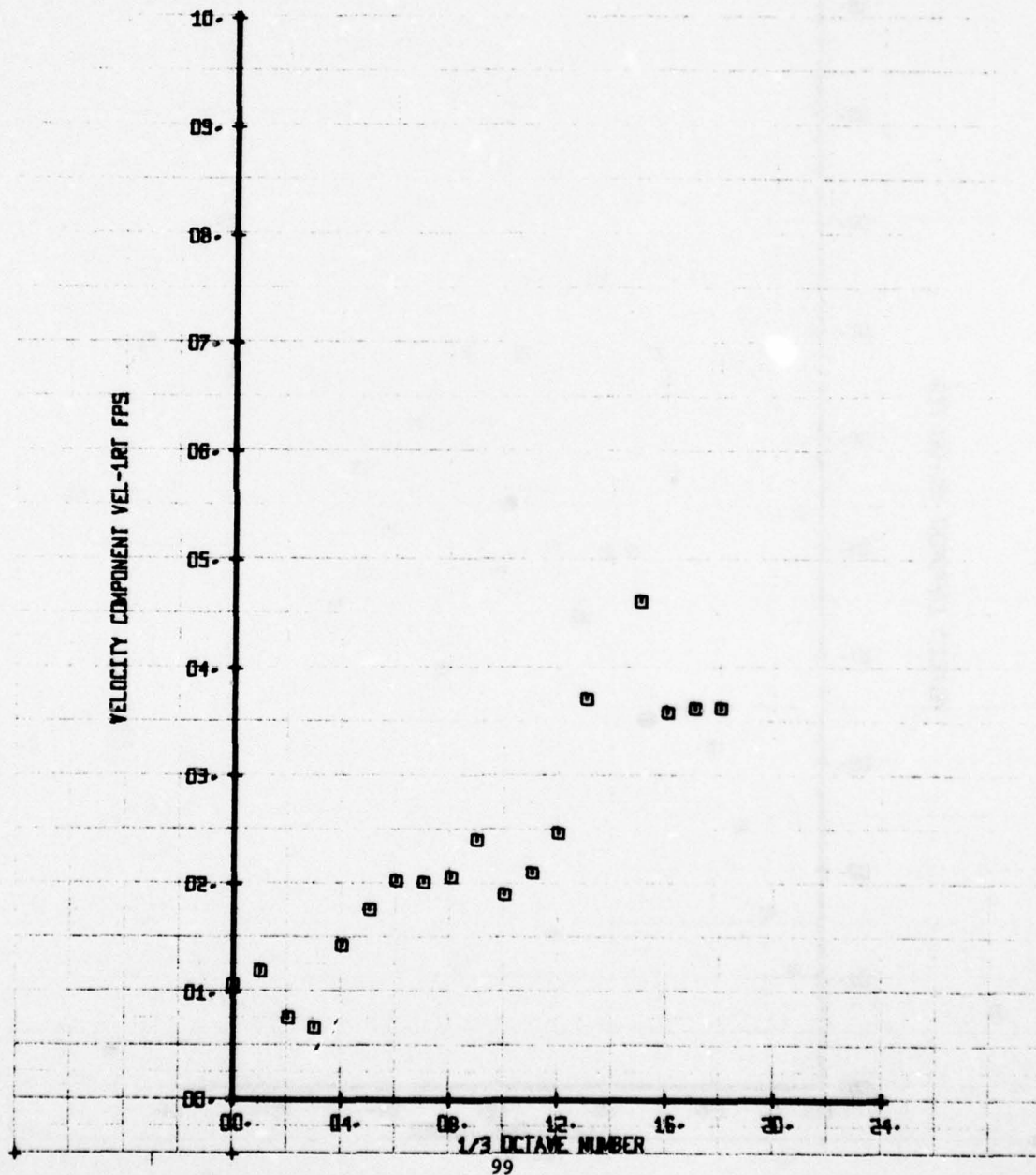
VELOCITY COMPONENT VEL-1RT FPS



1/3 OCTAVE NUMBER

HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 12

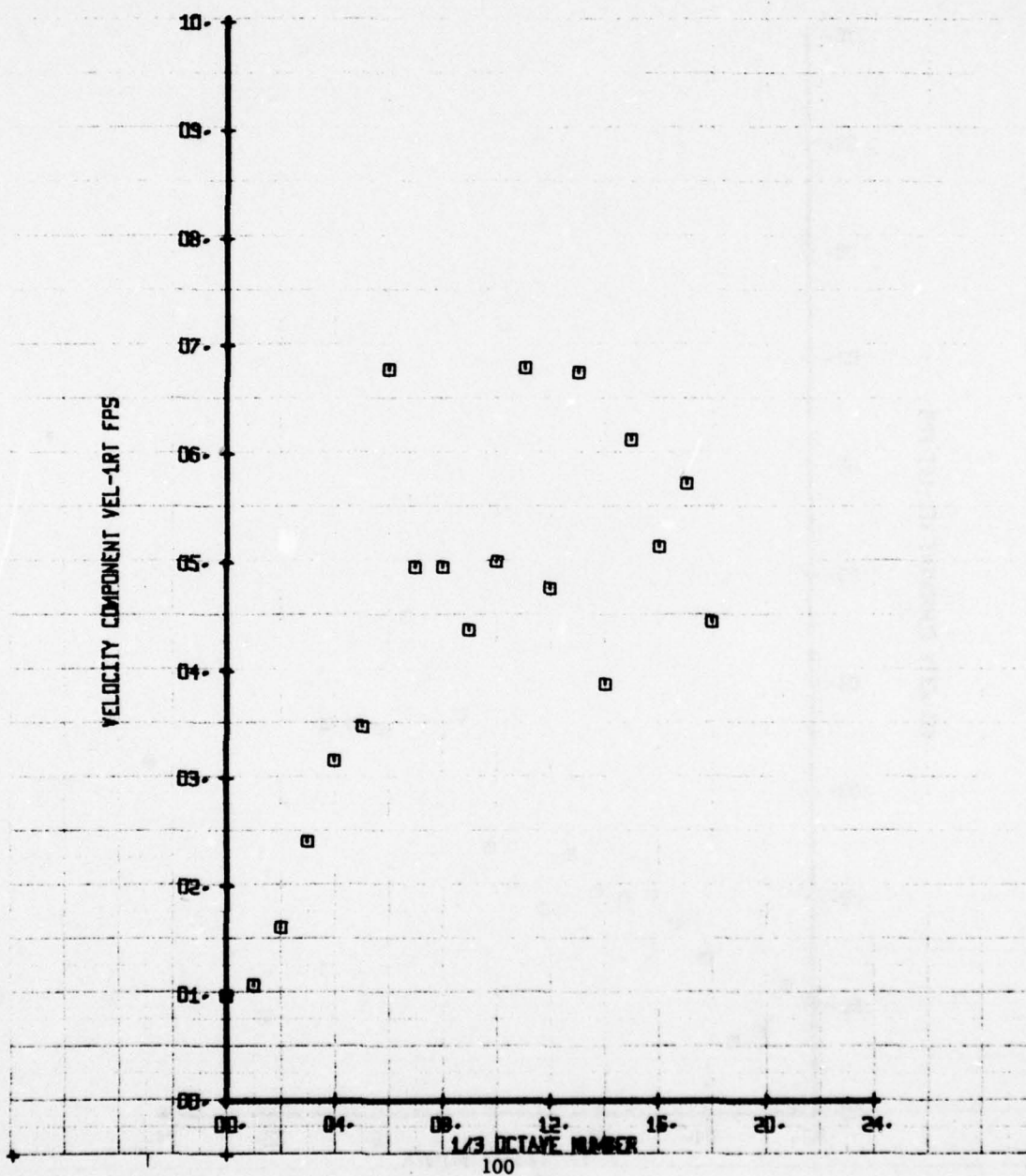
LEGEND  
 SYM CH PARAMETER  
 □ 74 VEL-1RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 14

LEGEND  
SYM CH PARAMETER  
□ 74 VEL-1RT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS

BASE CONFIG- 800 FPM DESCENT

RUN 196 TP 17

SYM

U

CH

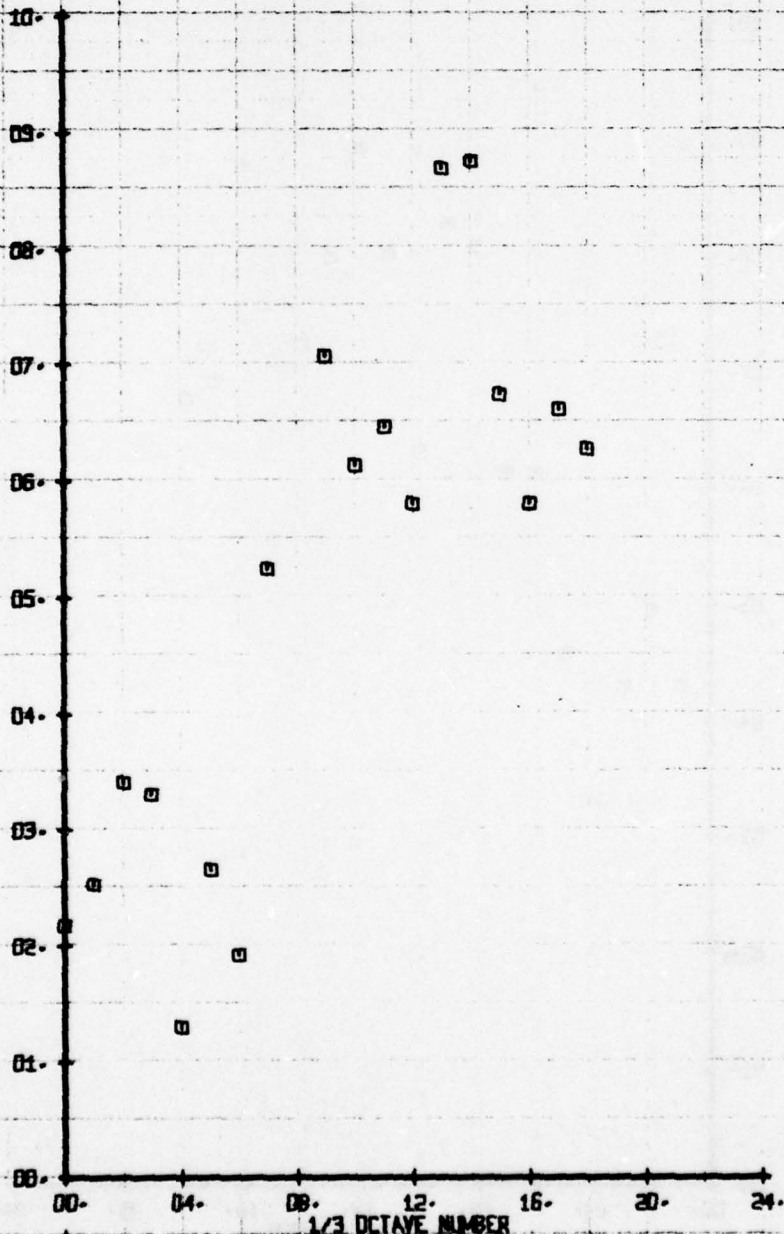
74

LEGEND

PARAMETER

VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



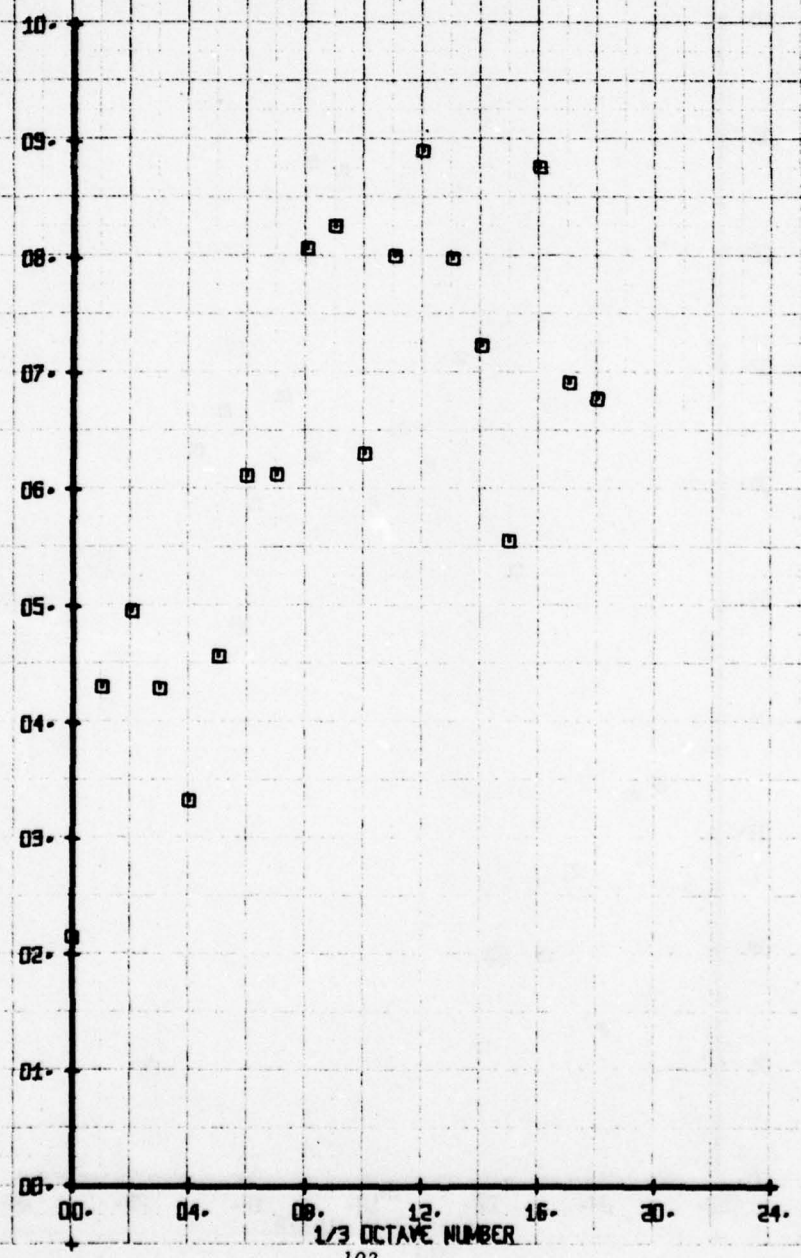
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 1B

SYM  
 □

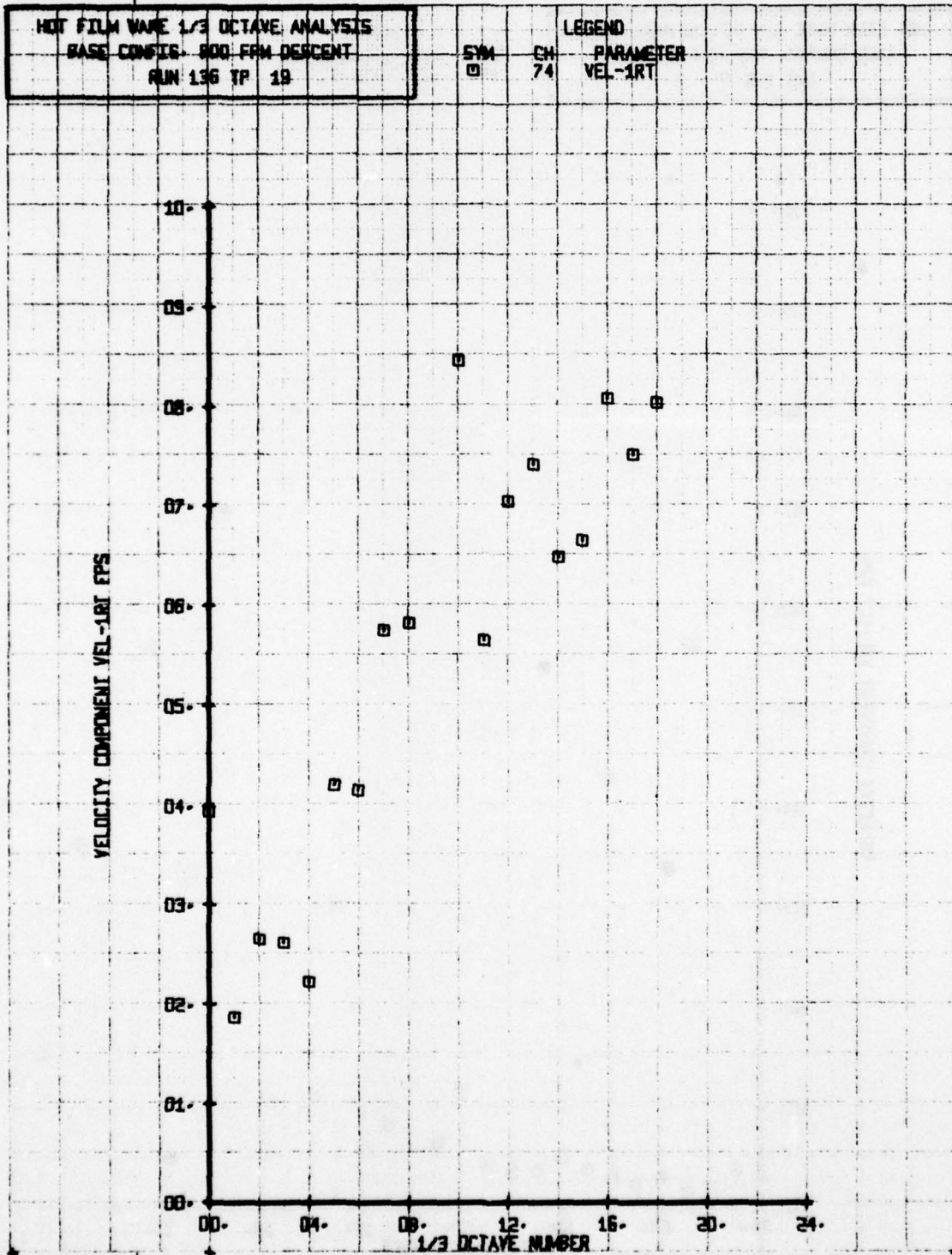
CH  
 74

LEGEND  
 PARAMETER  
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS







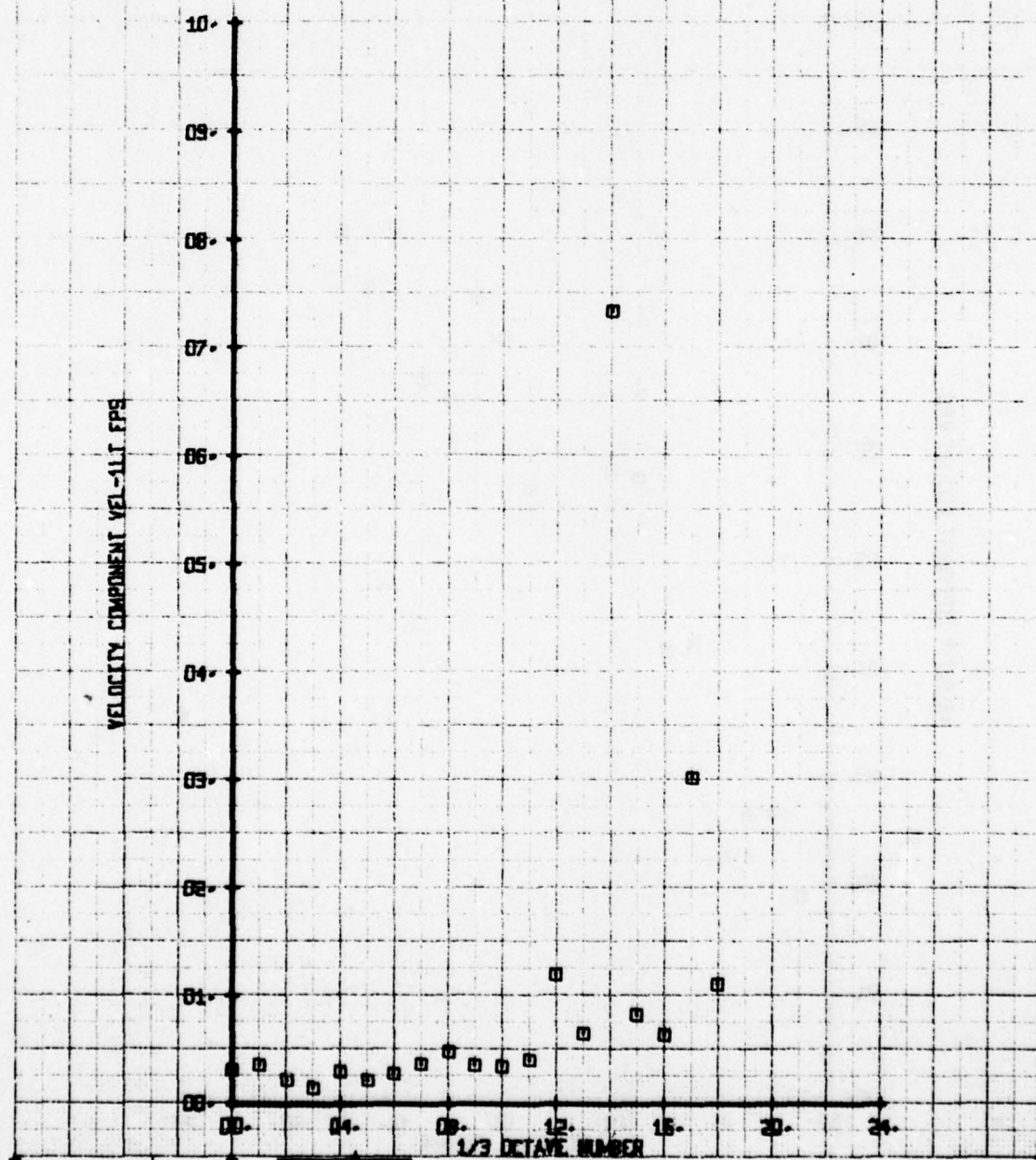
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800 FPM DESCENT  
 RUN 136 TP 2

SYM  
 0

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



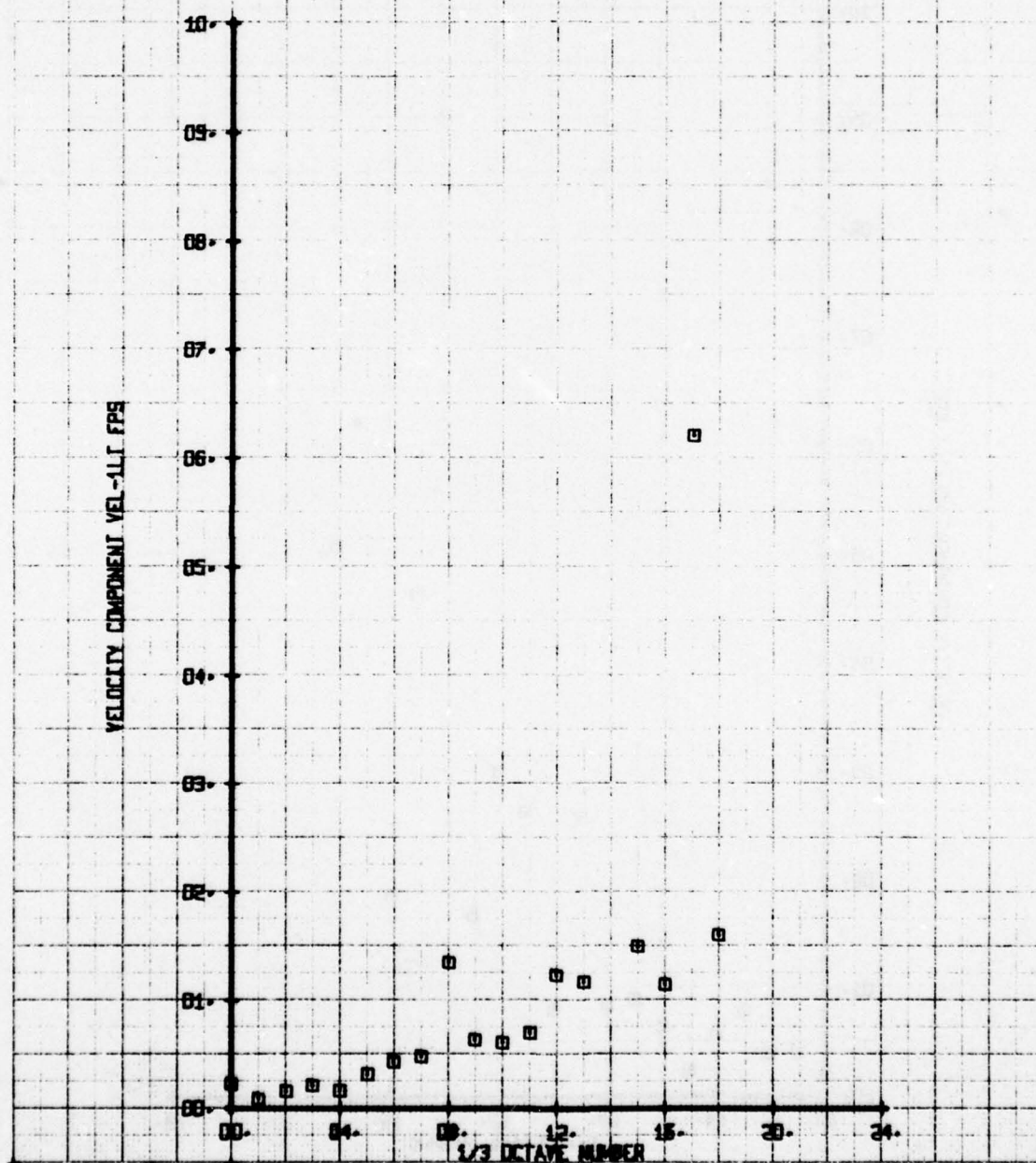
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 4

SYM  
□

CH  
73

LEGEND  
PARAMETER  
VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS





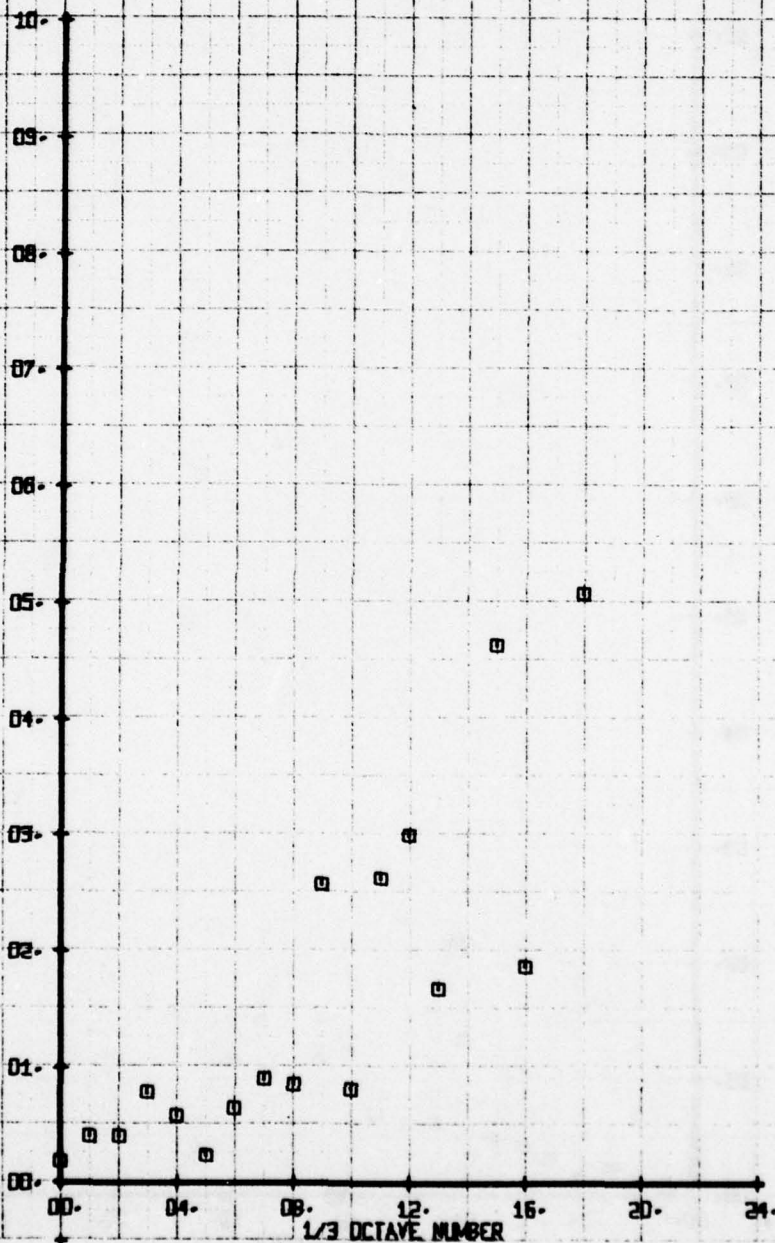
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 6

SYM  
 □

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



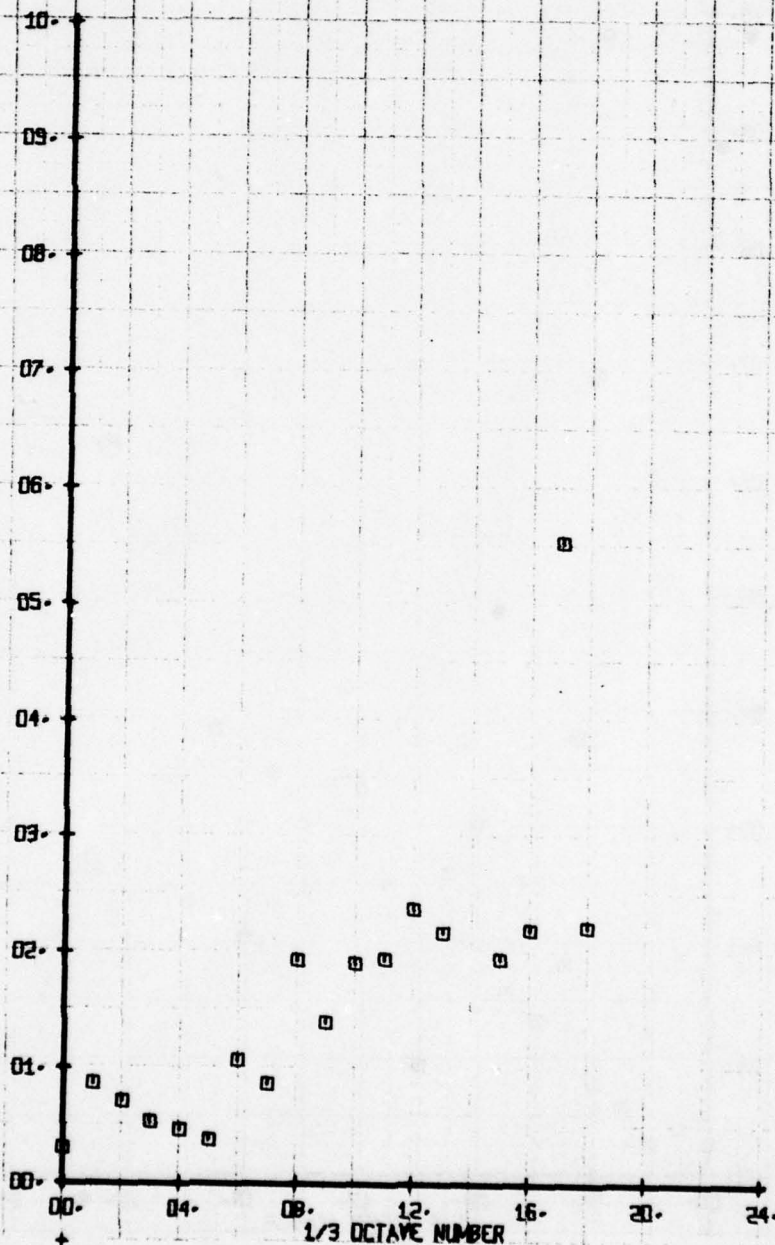
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800 FPM DESCENT  
 RUN 136 TP B

SYM  
 0

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



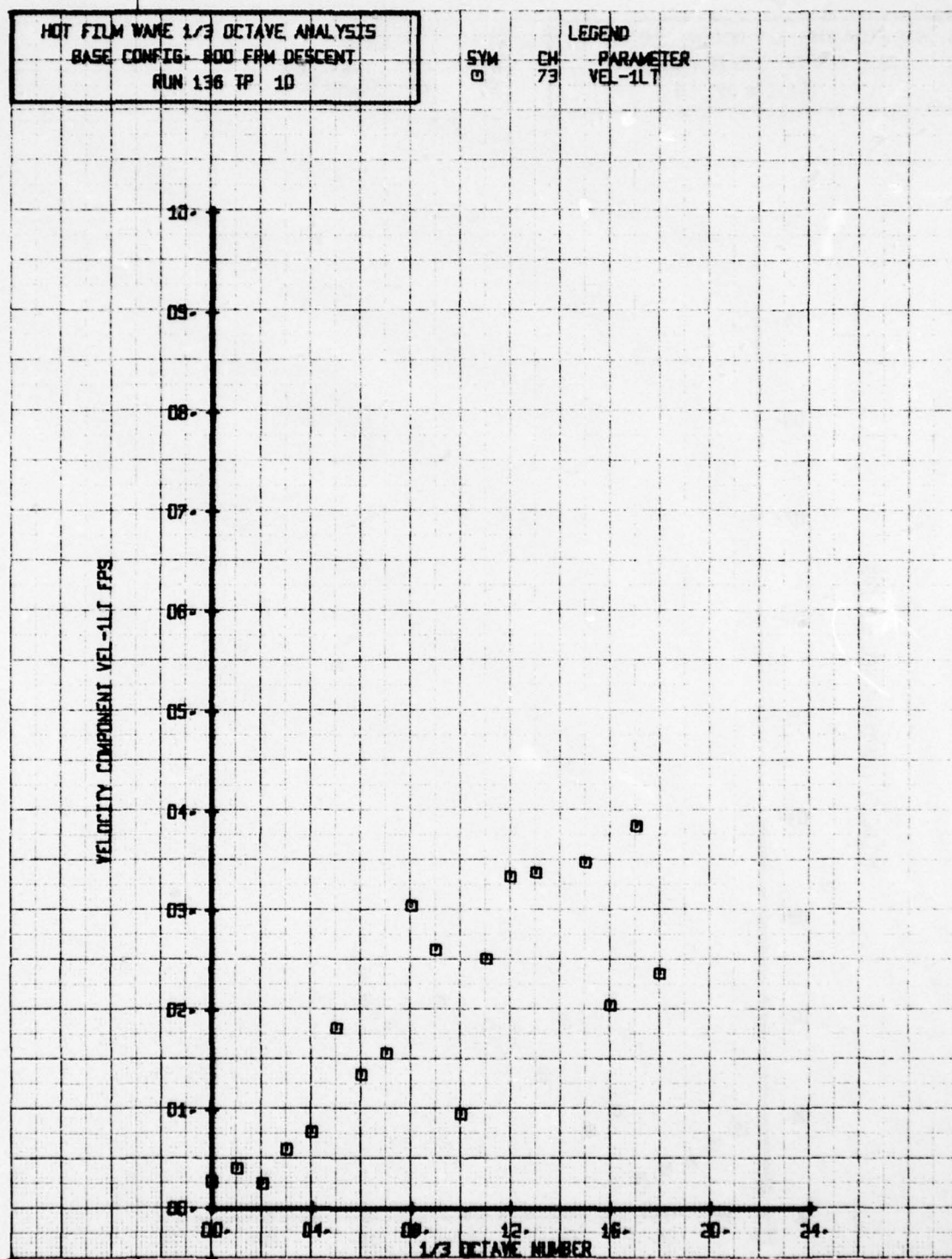
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 10

SYM  
□

CH  
73

LEGEND  
PARAMETER  
VEL-1LT

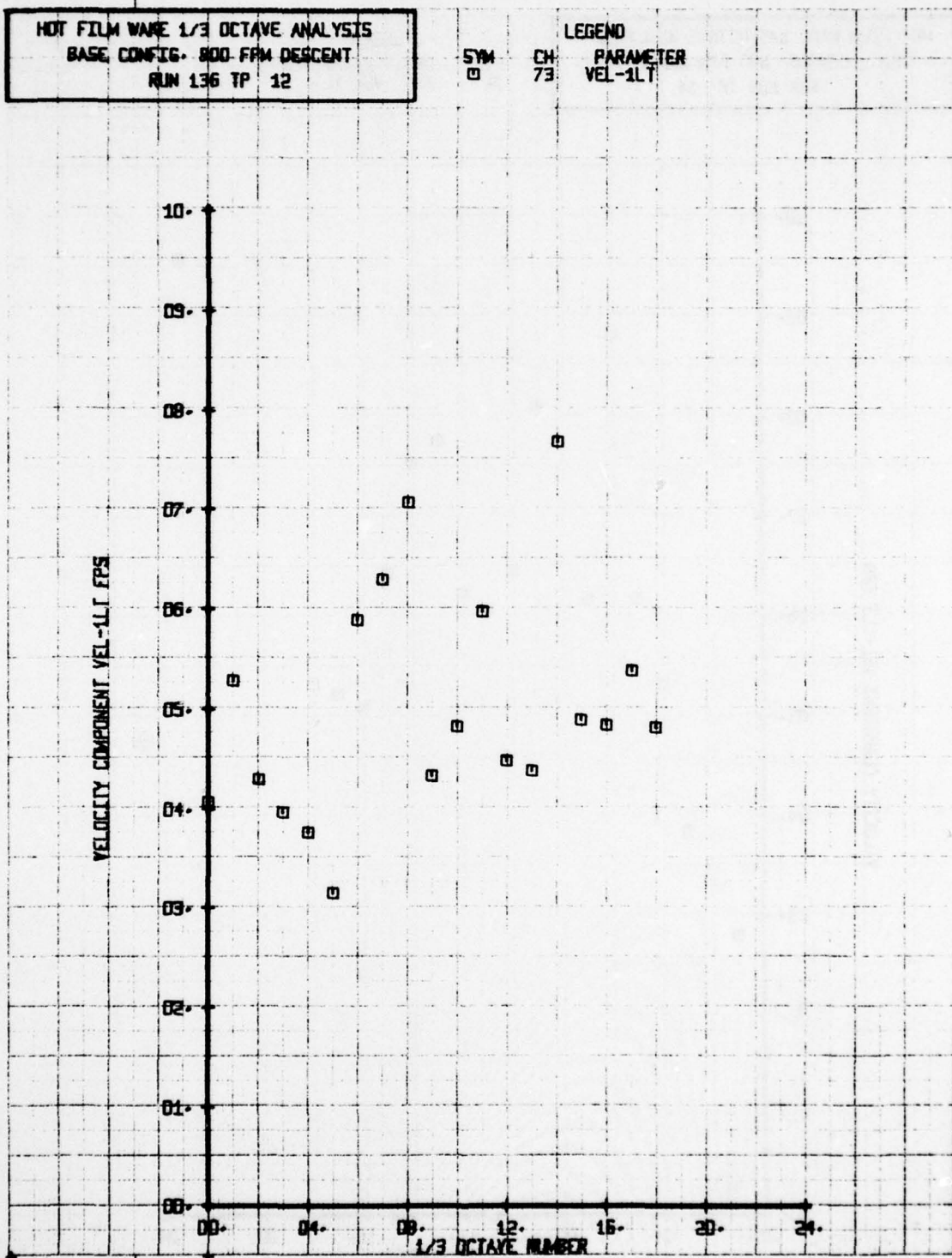
VELOCITY COMPONENT VEL-1LT FPS





HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800-FPM DESCENT  
 RUN 136 TP 12

SYN CH PARAMETER  
 0 73 VEL-1LT



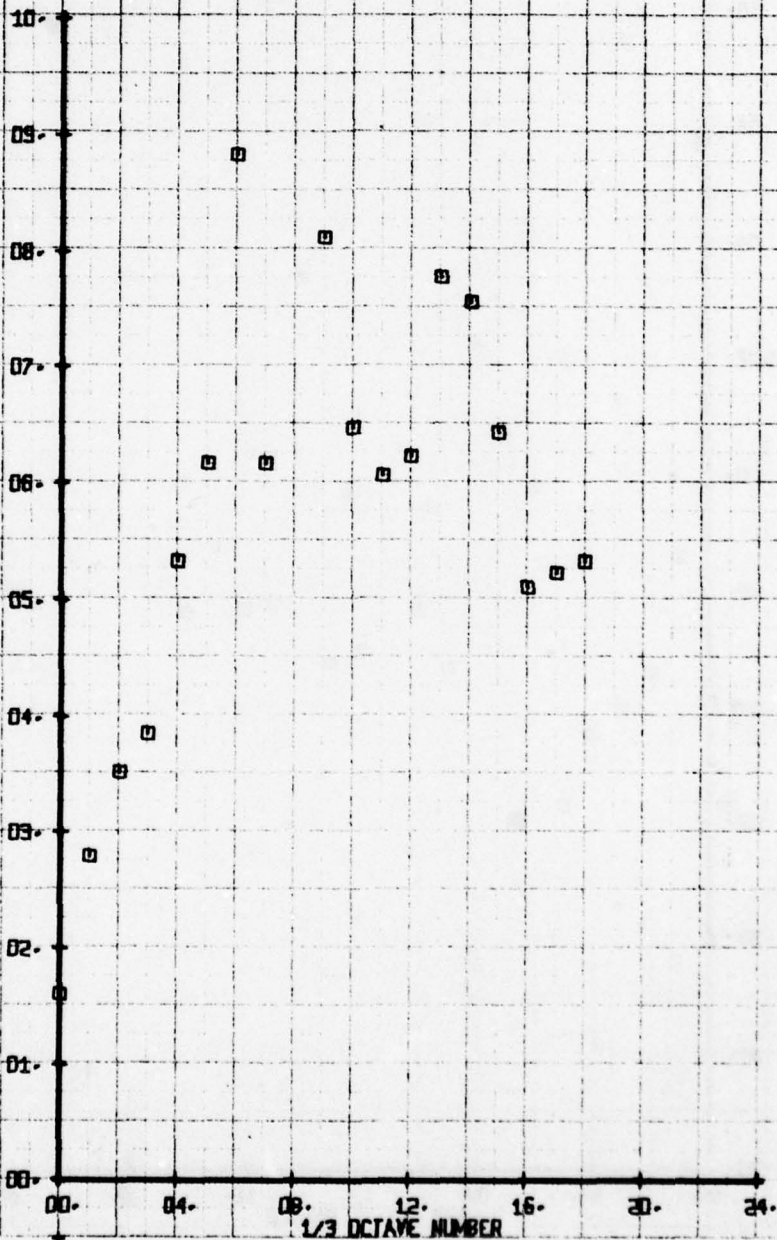
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 14

SYM  
□

CH  
73

LEGEND  
PARAMETER  
VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



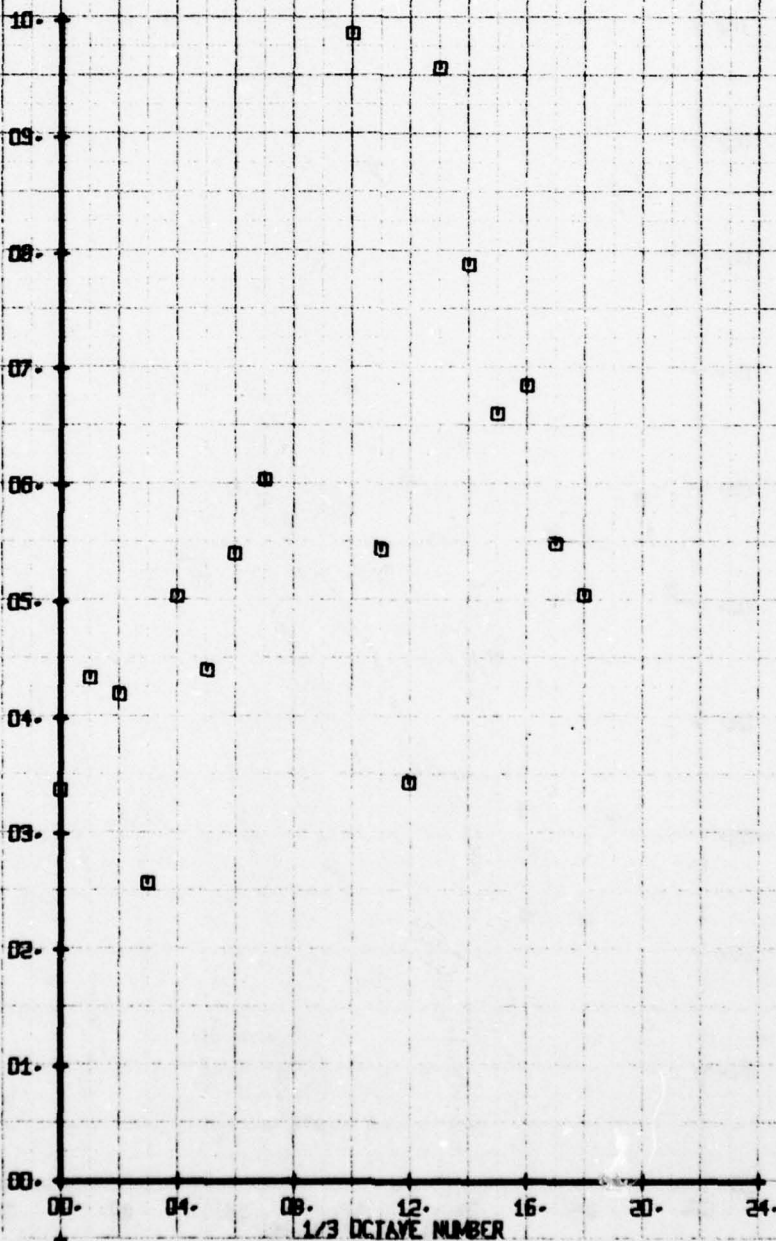
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONTS- 800 FPM DESCENT  
 RUN 136 TP 17

SYM  
 □

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



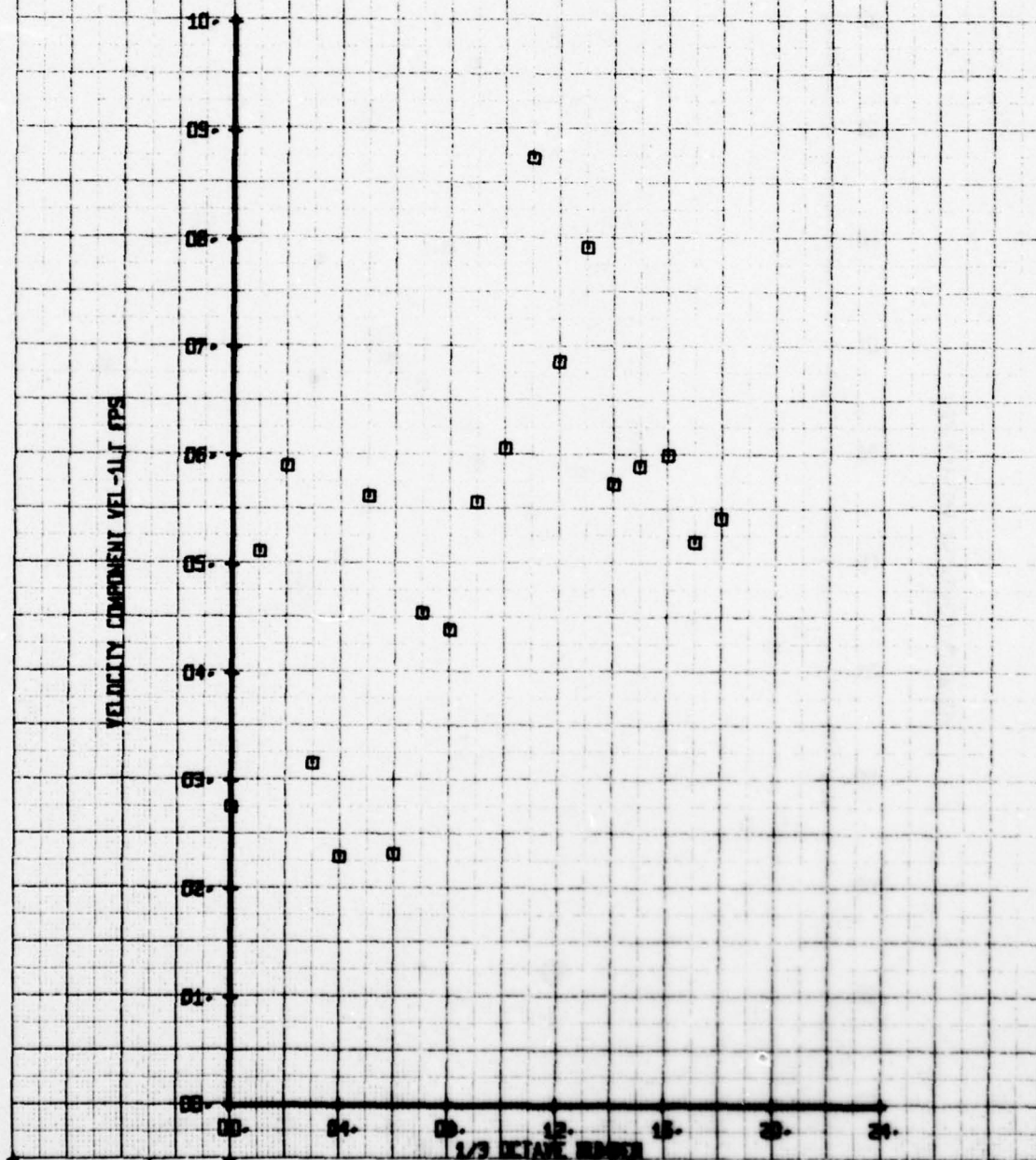


HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 18

SYM  
 □

LEGEND  
 CH 73  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



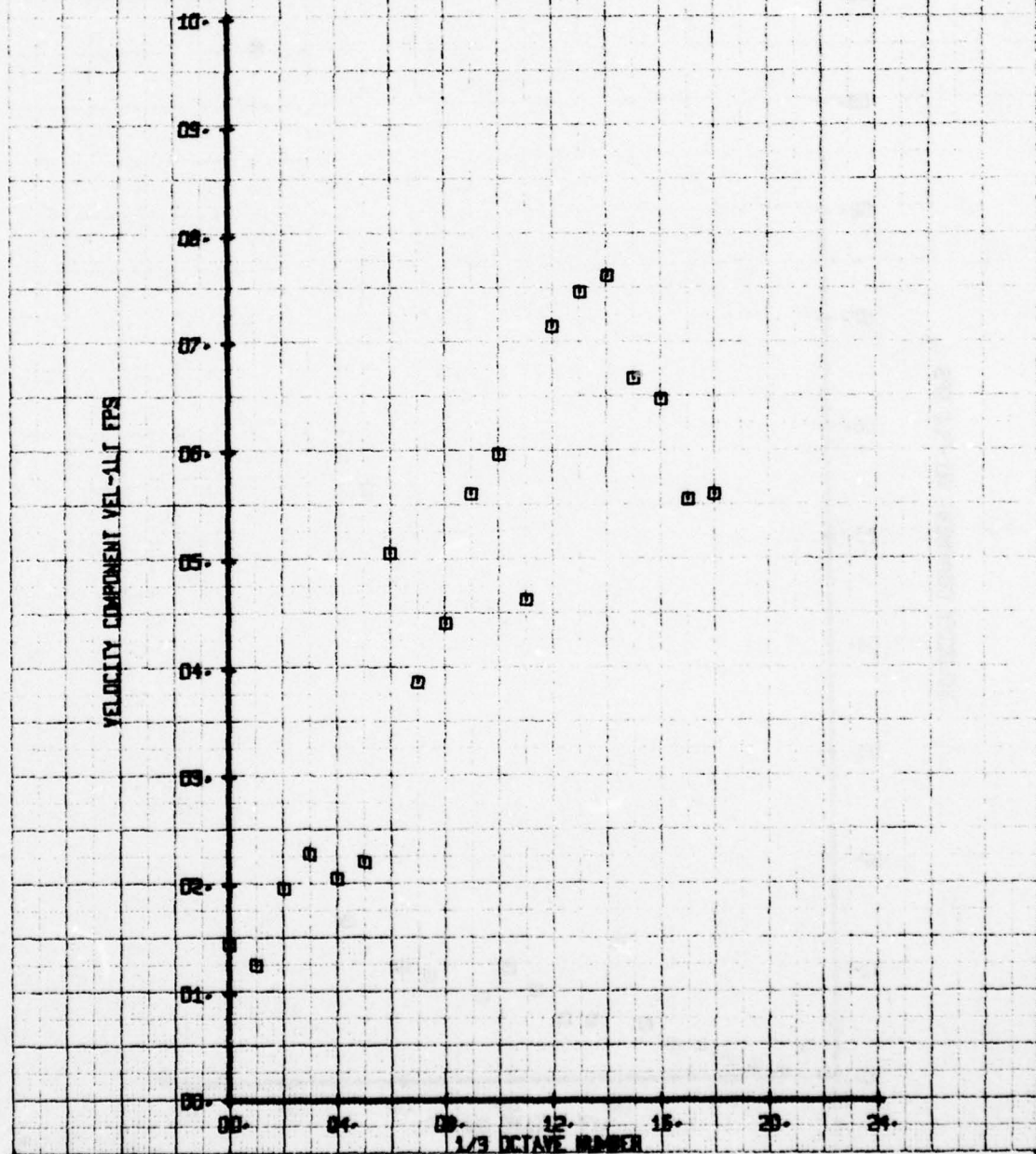
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800 FPM DESCENT  
 RUN 136 TP 19

SYM  
 □

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

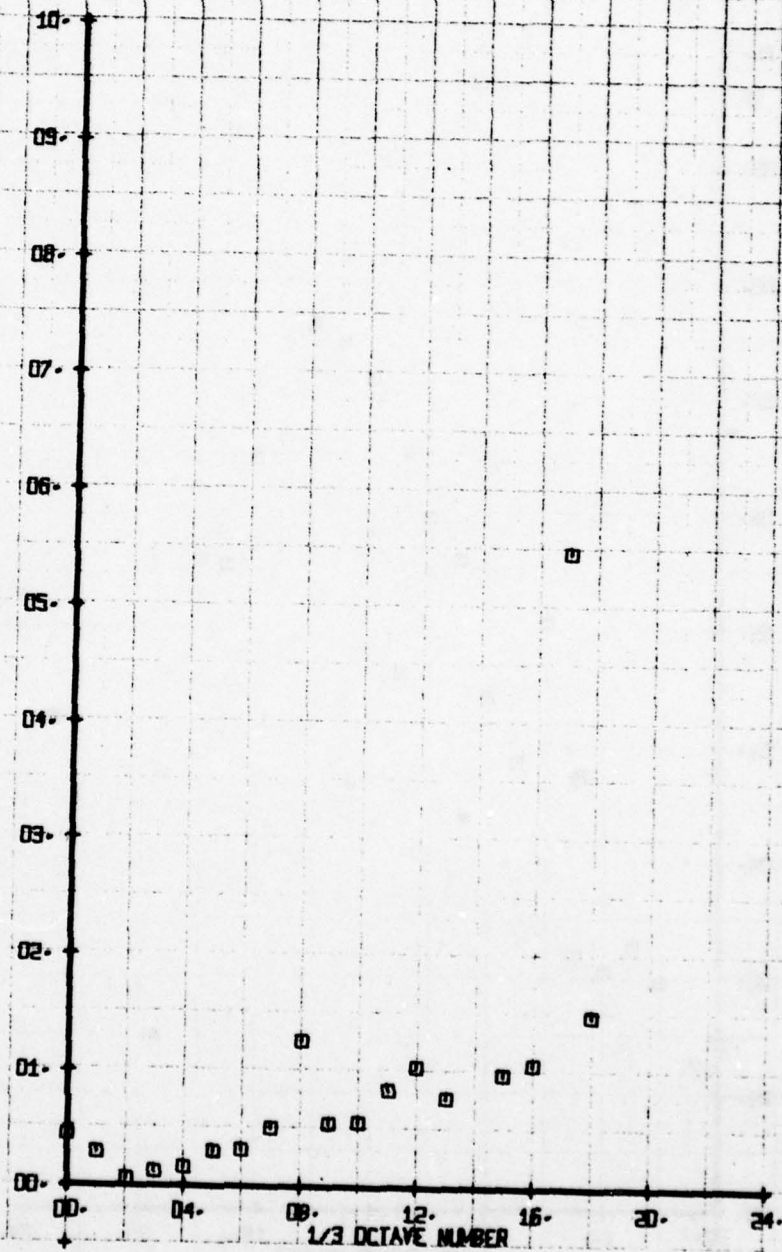
VELOCITY COMPONENT VEL-1LT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DECENT  
RUN 136 TP 2

SYN CH PARAMETER  
0 72 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



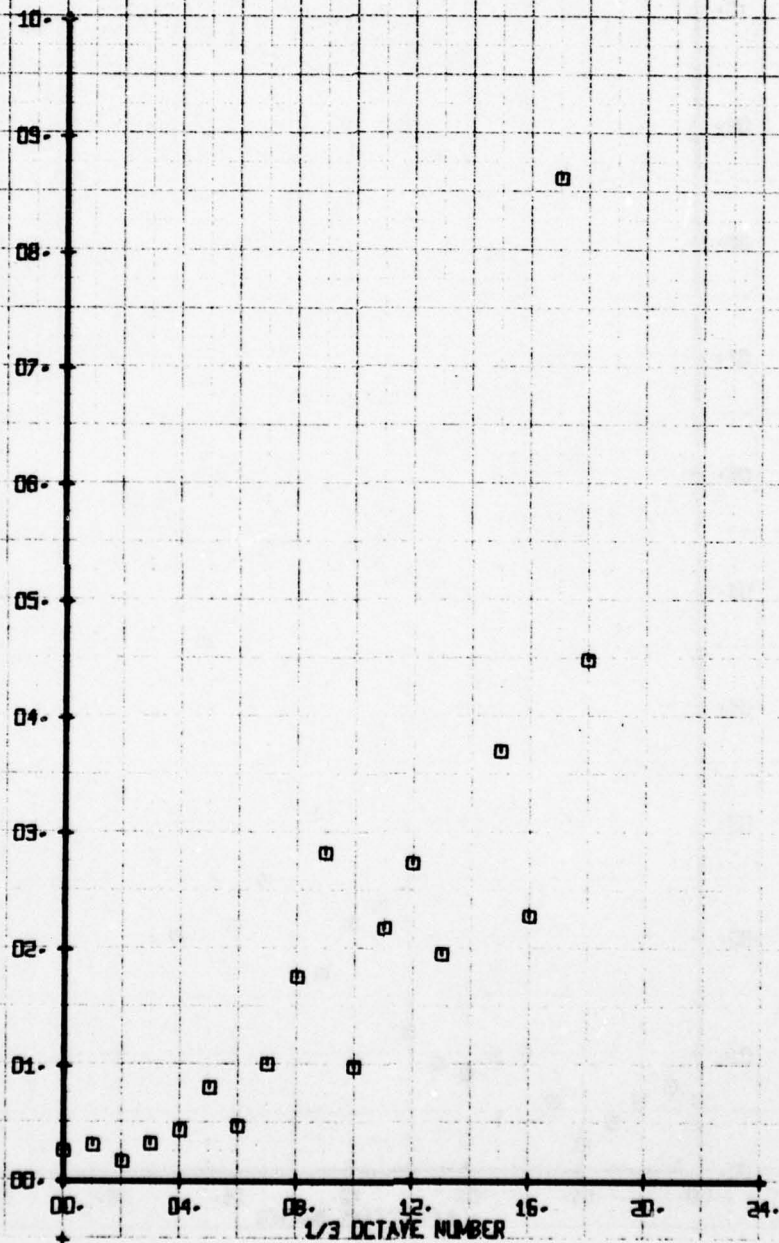


HOT FILM WARE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800-FPM DESCENT  
RUN 136 TP 4

SYM  
□

LEGEND  
CH 72  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

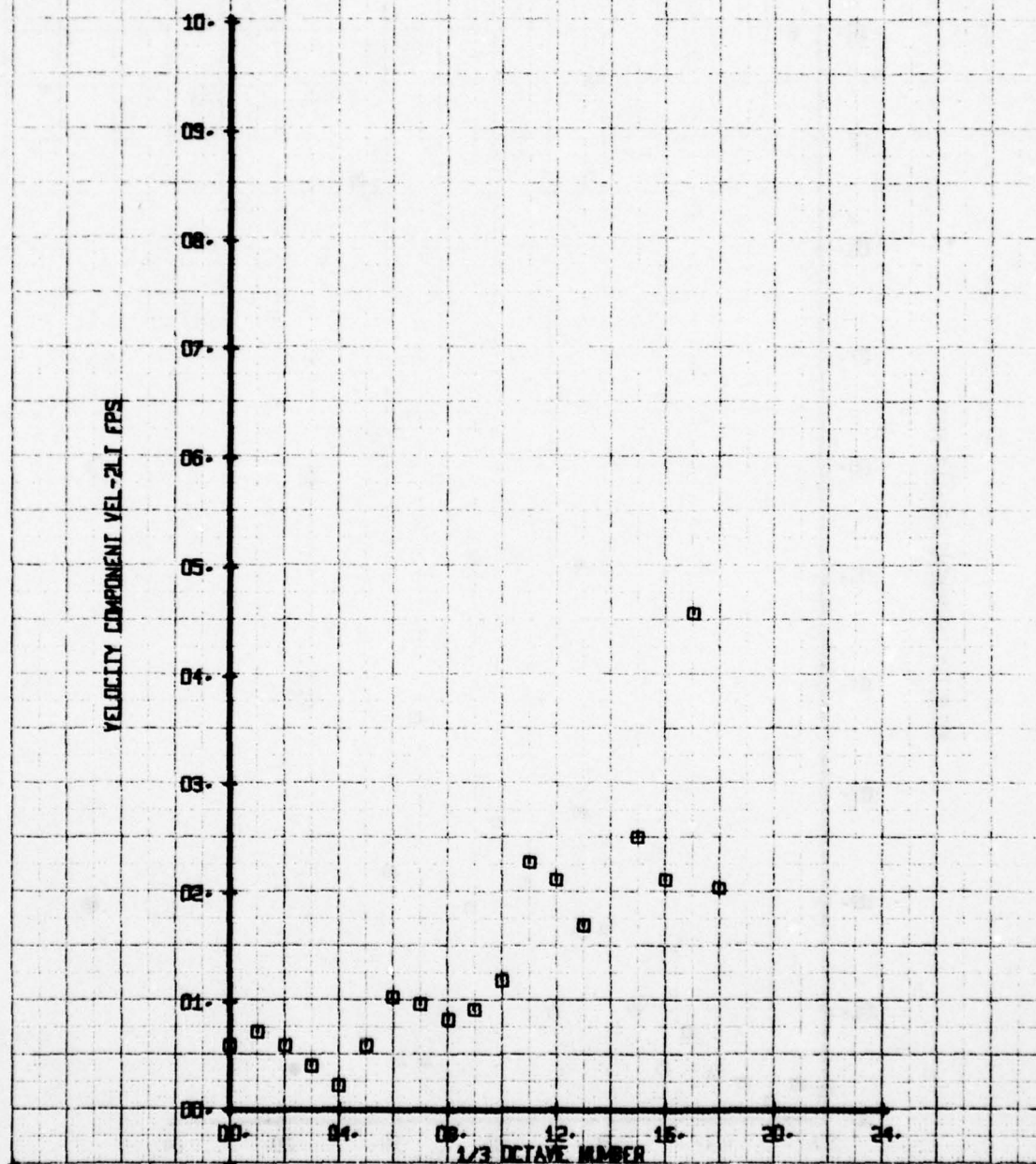


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 6

SYM  
□

LEGEND  
CH 72  
PARAMETER  
VEL-2LT

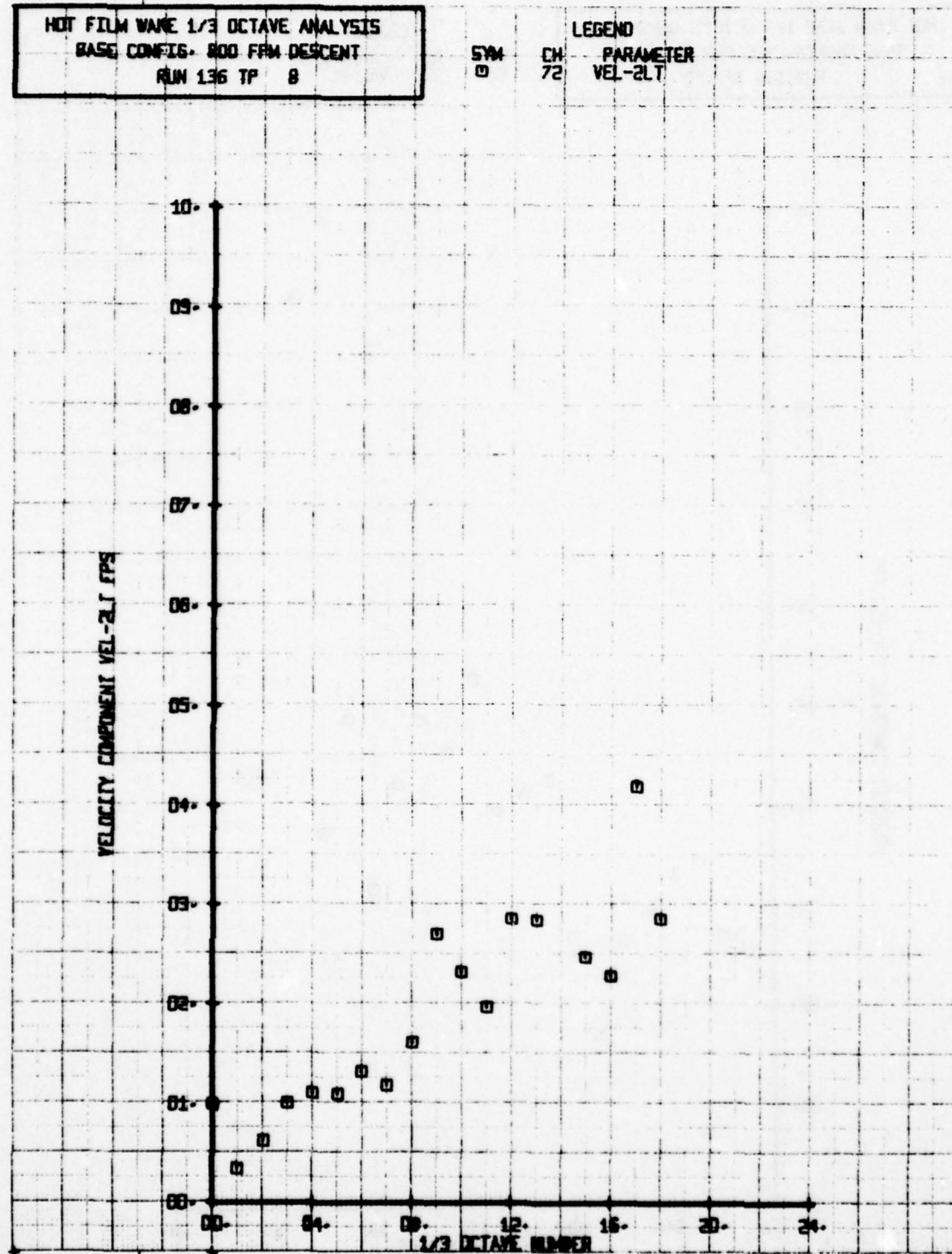
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800 FPM DESCENT  
 RUN 136 TP 8

SYM  
 □

LEGEND  
 CH 72  
 PARAMETER  
 VEL-2LT





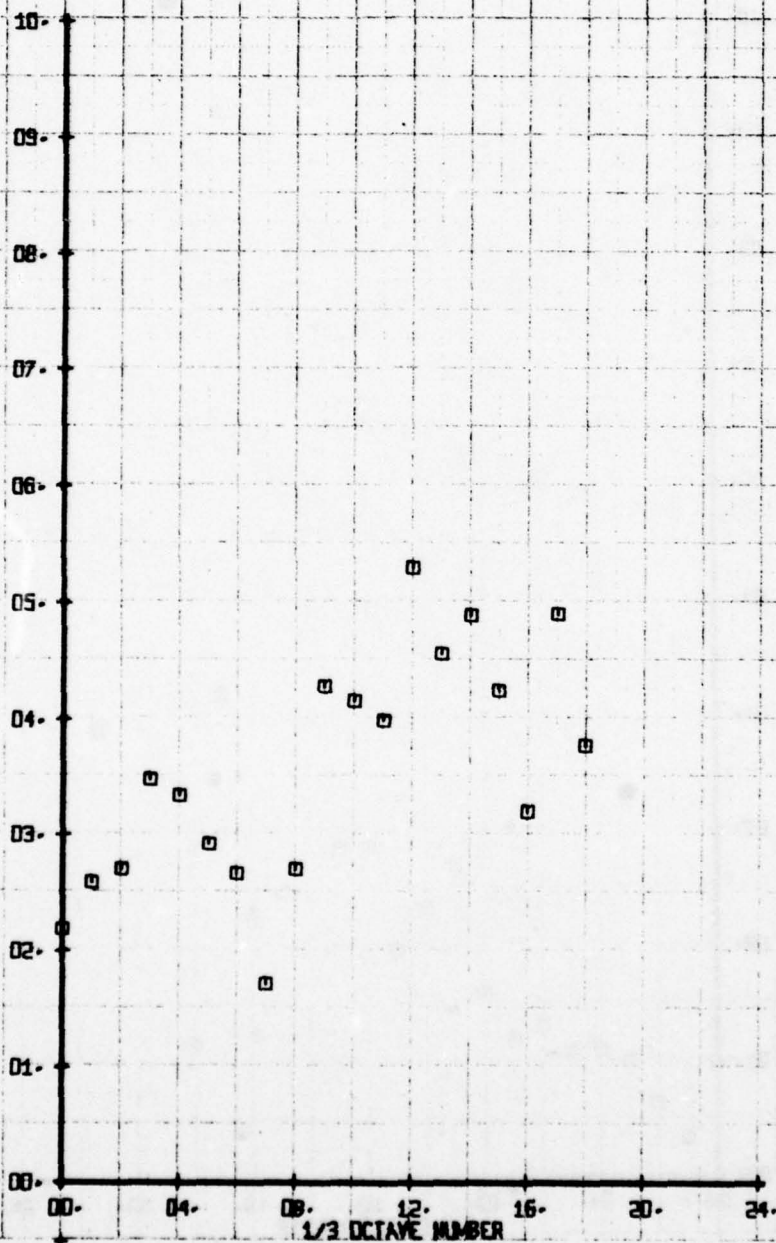
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 10

SYM  
□

CH  
72

LEGEND  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



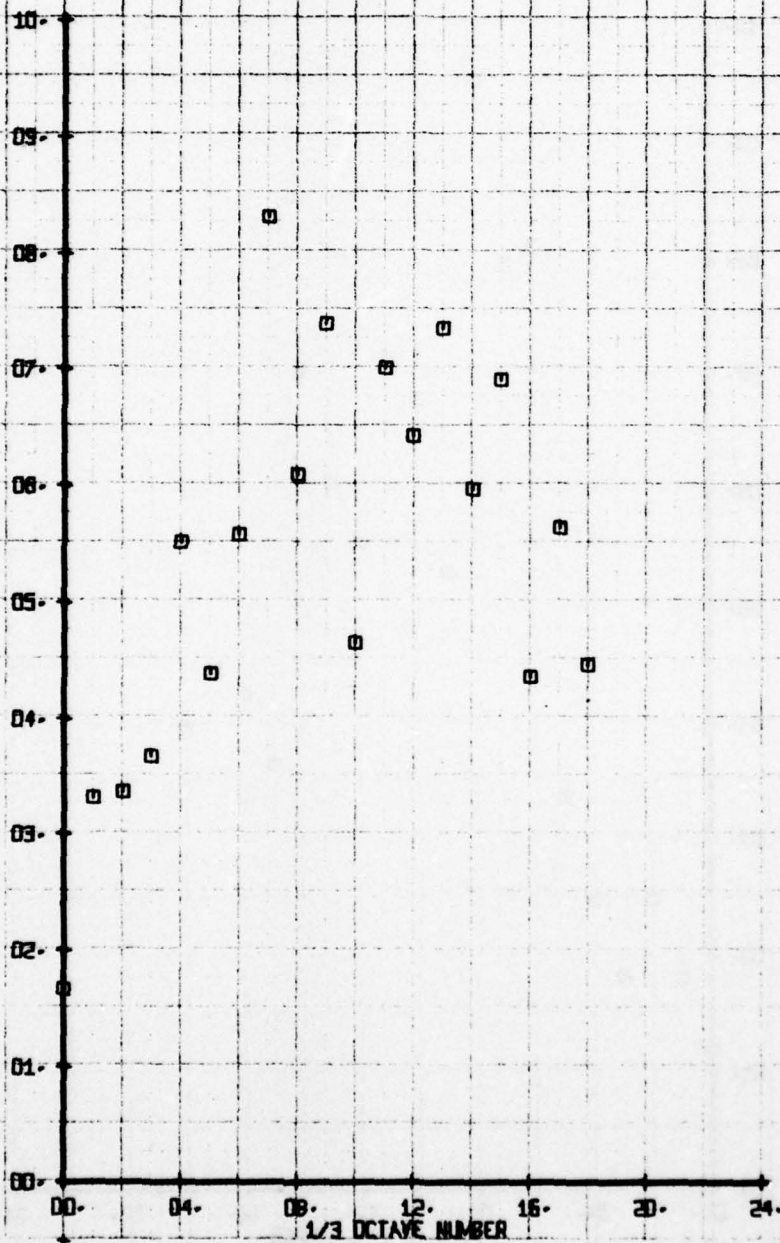
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800-FPM DESCENT  
 RUN 136 TP 12

SYM  
 0

CH  
 72

LEGEND  
 PARAMETER  
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



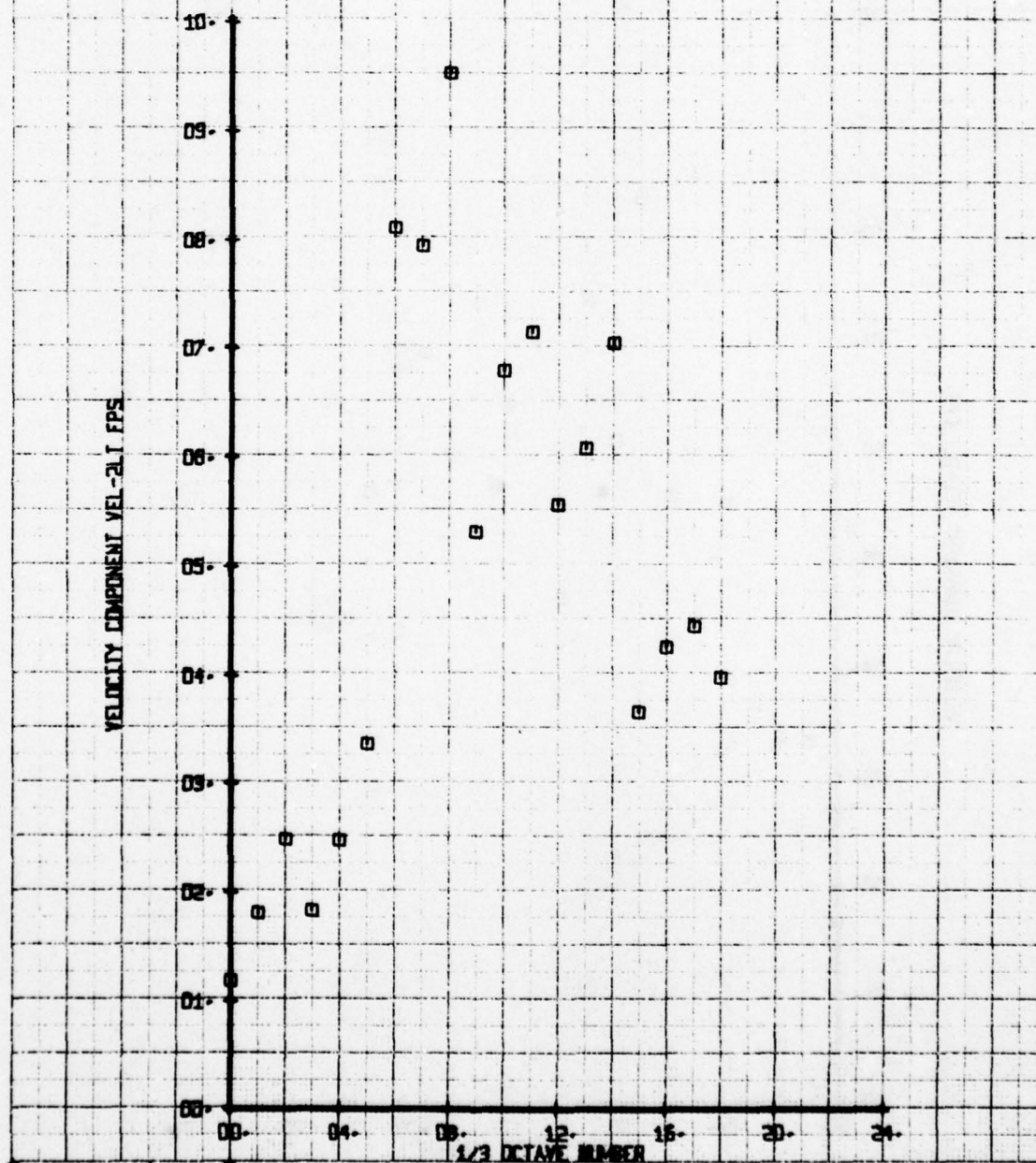
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800-FPM DESCENT  
RUN 136 TP 14

SYM  
□

CH  
72

LEGEND  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS





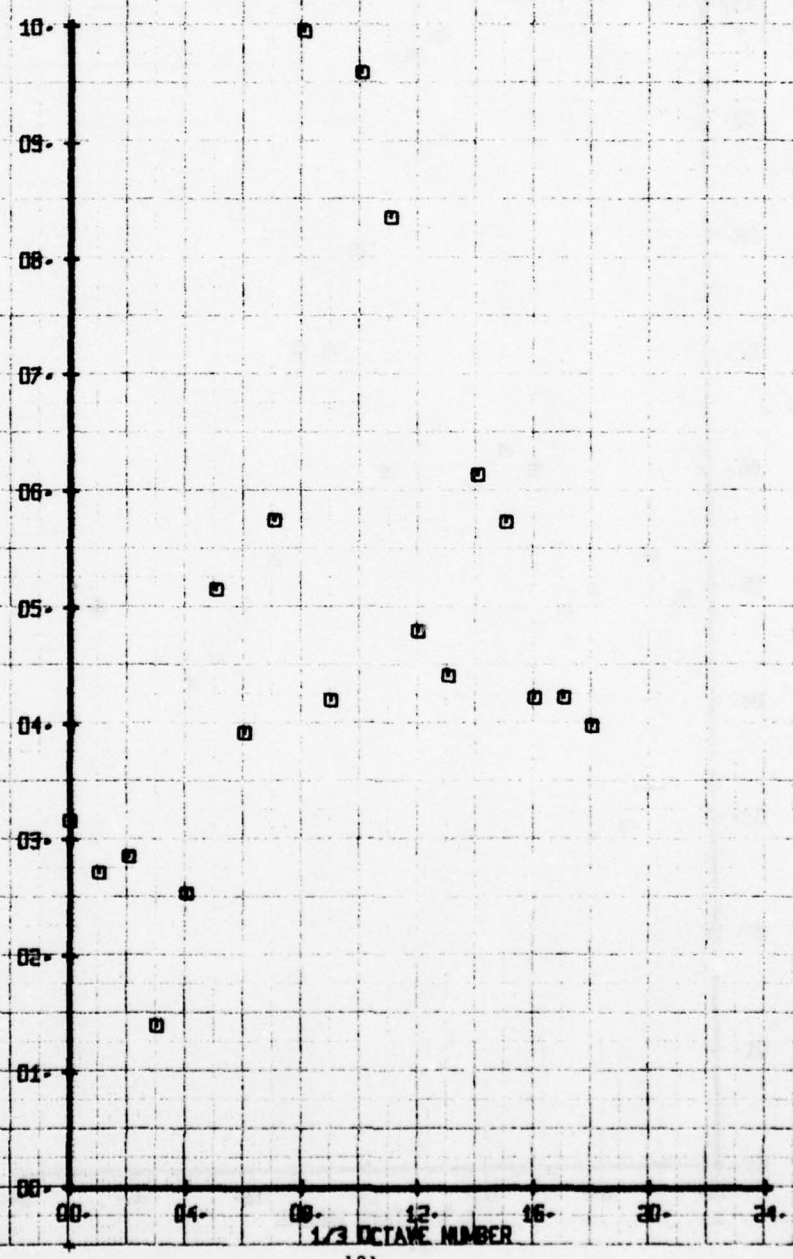
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG. 800 FPM DESCENT  
RUN 136 TP 17

SYM  
0

CH  
72

LEGEND  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



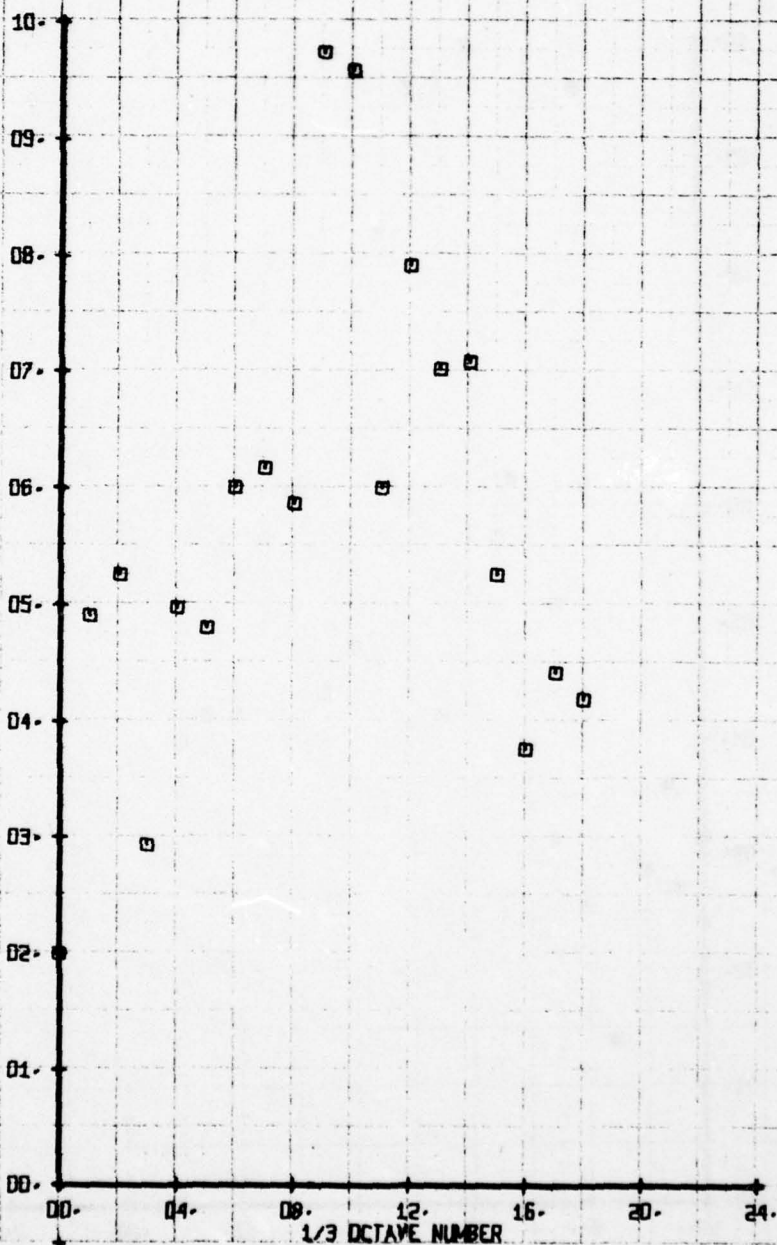
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 1B

SYM  
 0

CH  
 72

LEGEND  
 PARAMETER  
 VEL-ZLT

VELOCITY COMPONENT VEL-ZLT FPS



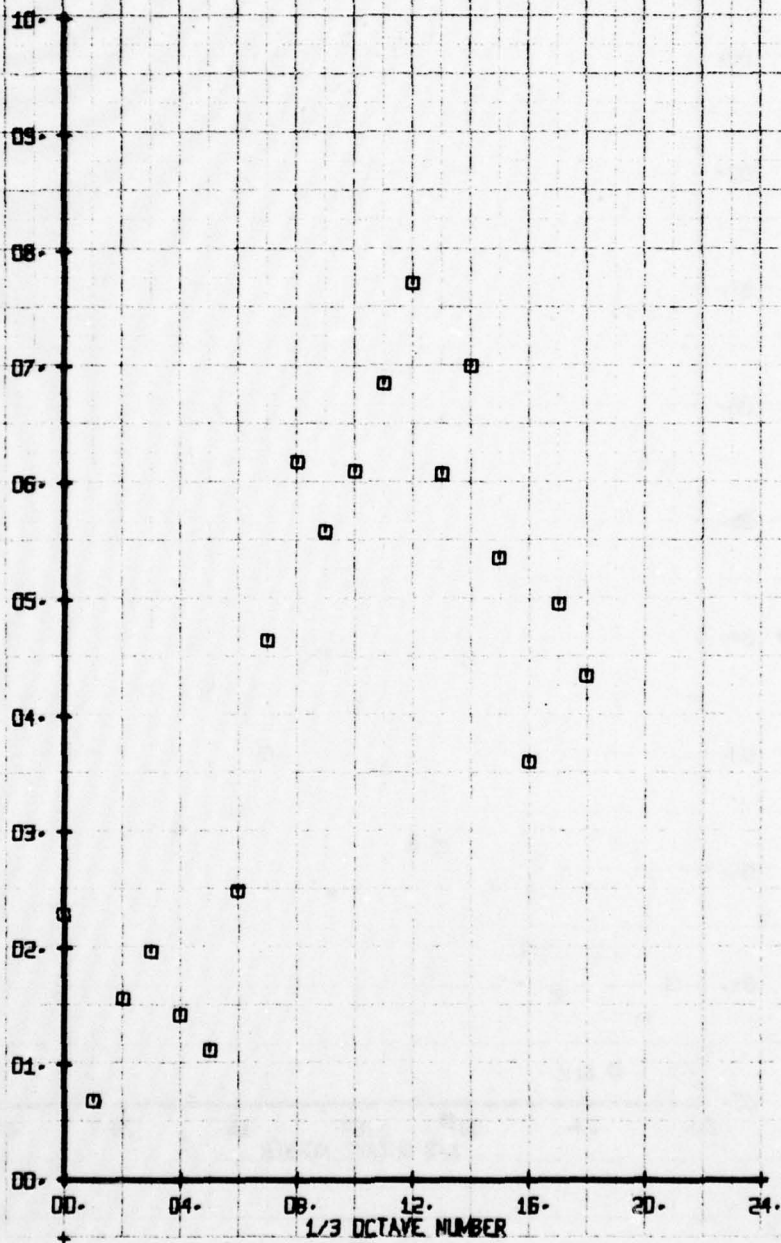
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASE CONFIG- 800 FPM DESCENT  
RUN 136 TP 18

SYM  
□

CH  
72

LEGEND  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS





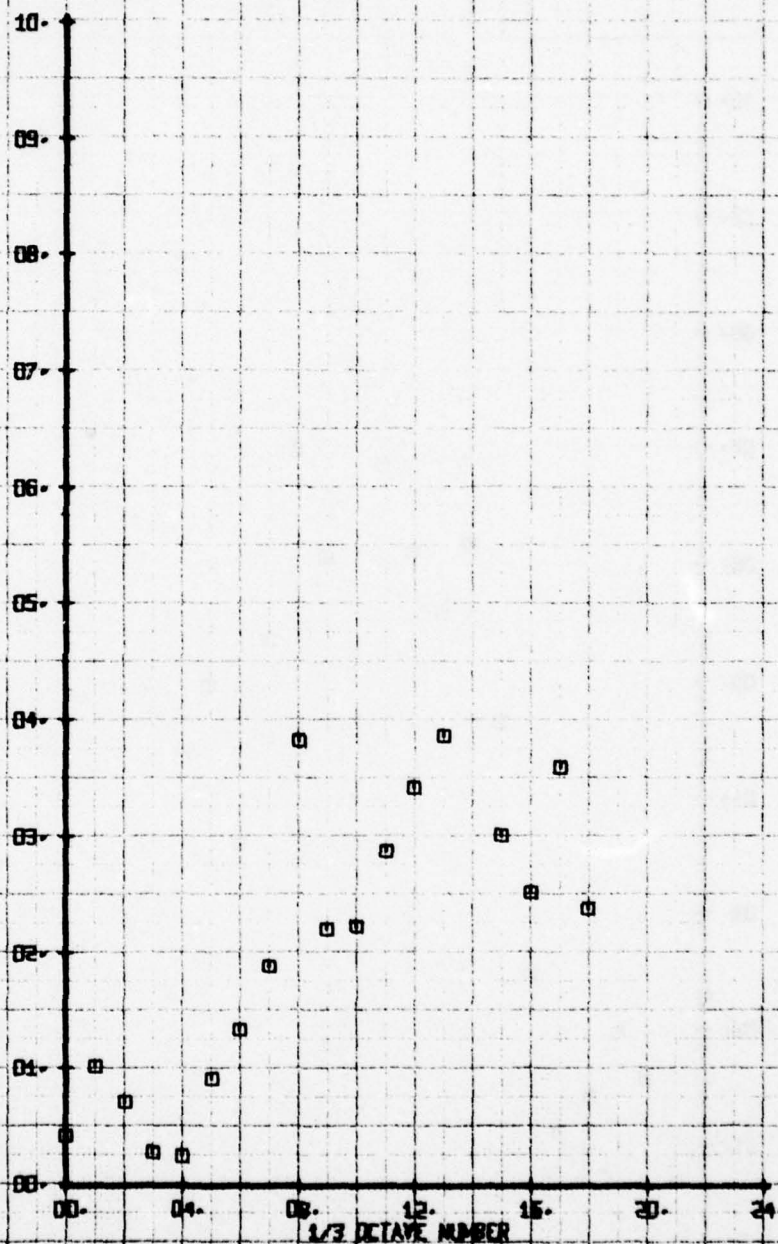
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG. 800 FPM DESCENT  
 RUN 136 TP 4

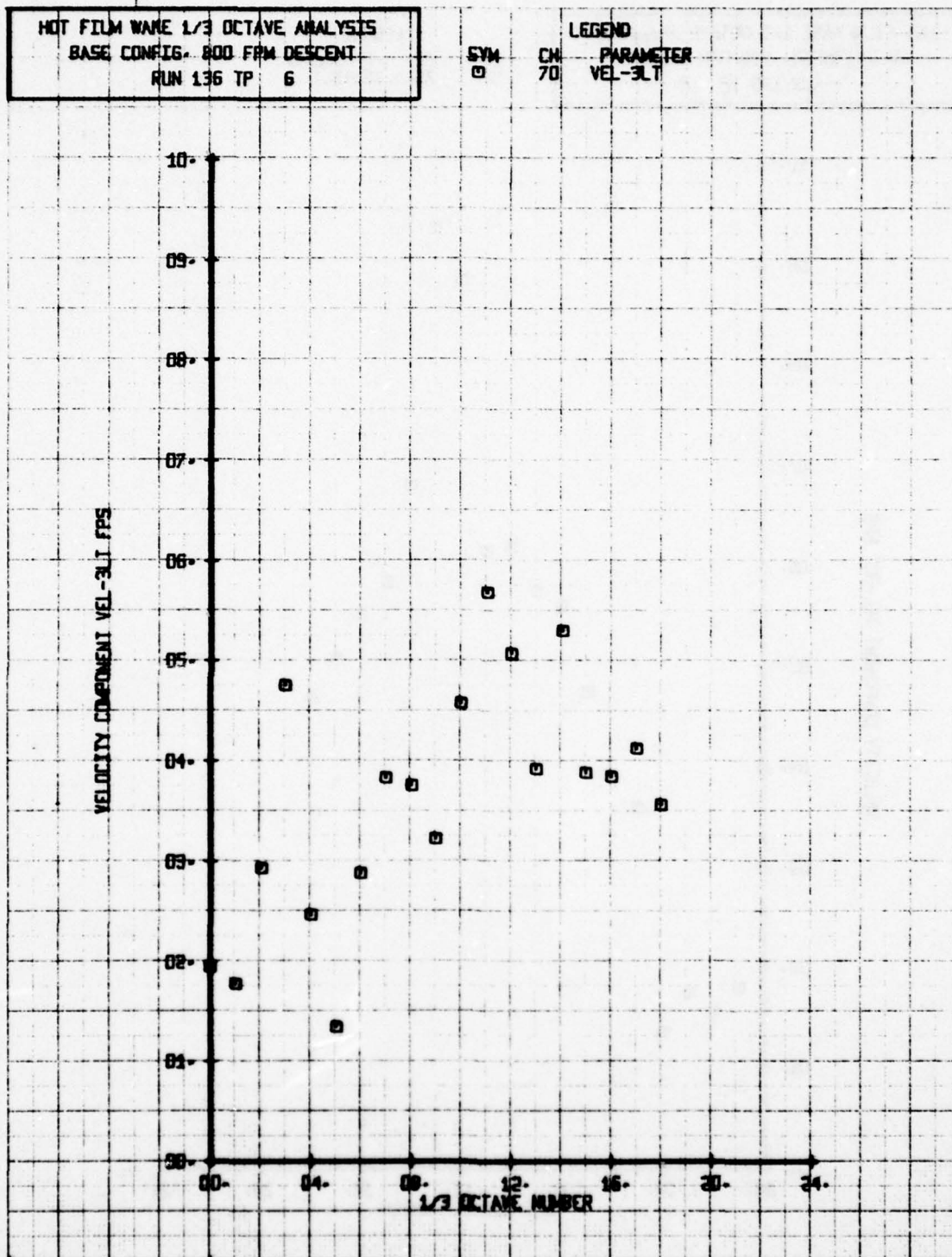
SYM  
 □

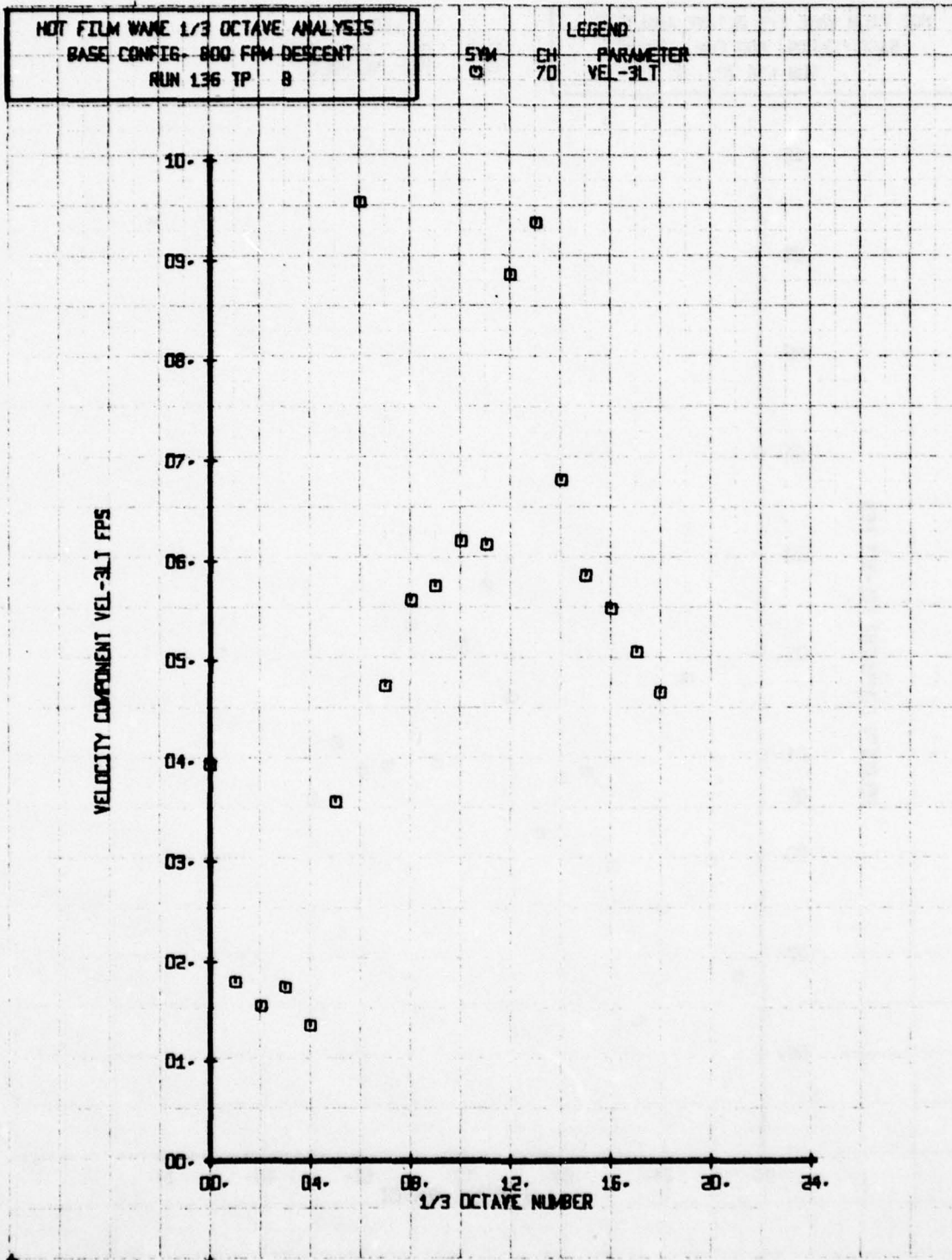
CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

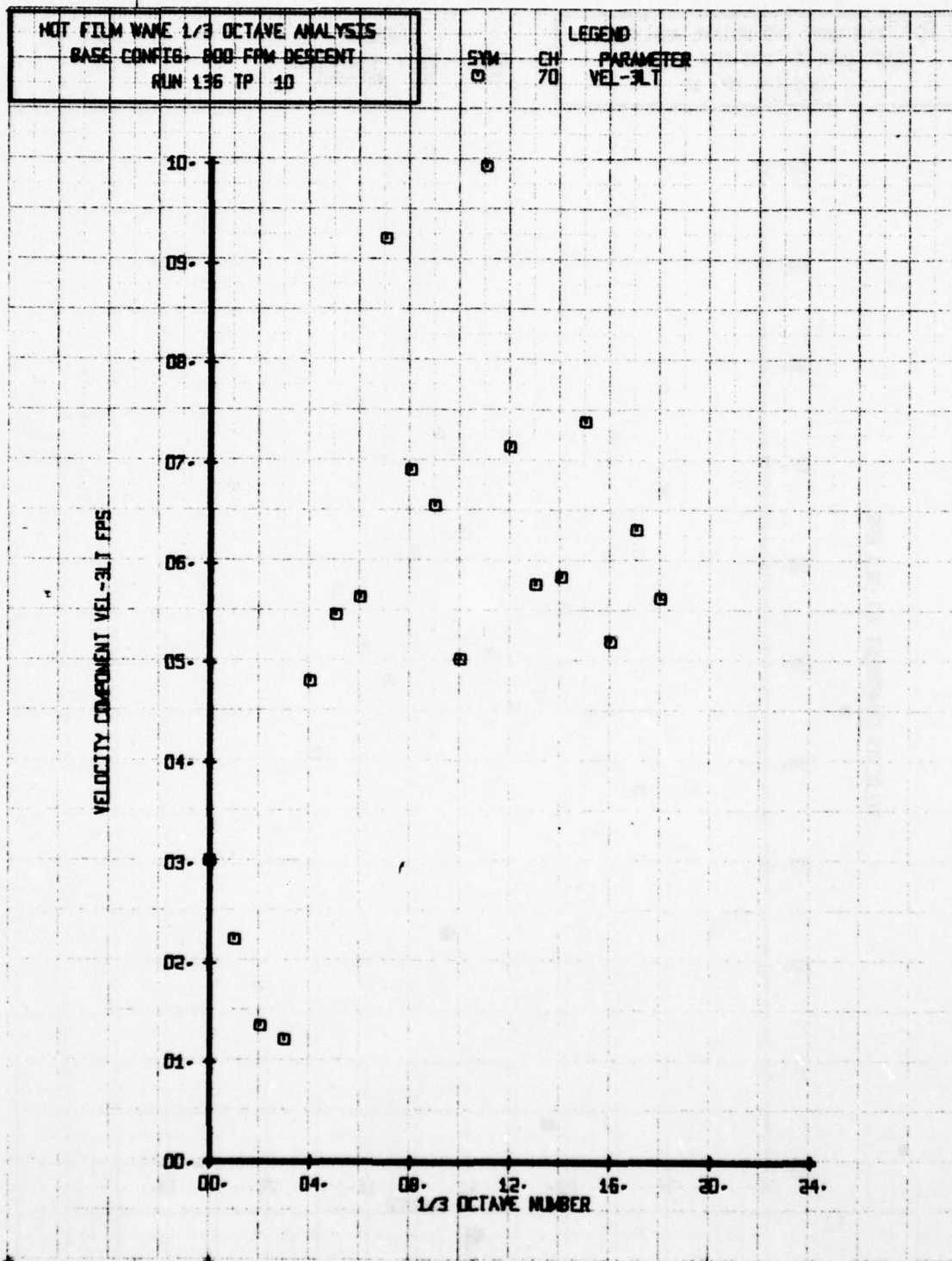
VELOCITY COMPONENT VEL-3LT FPS

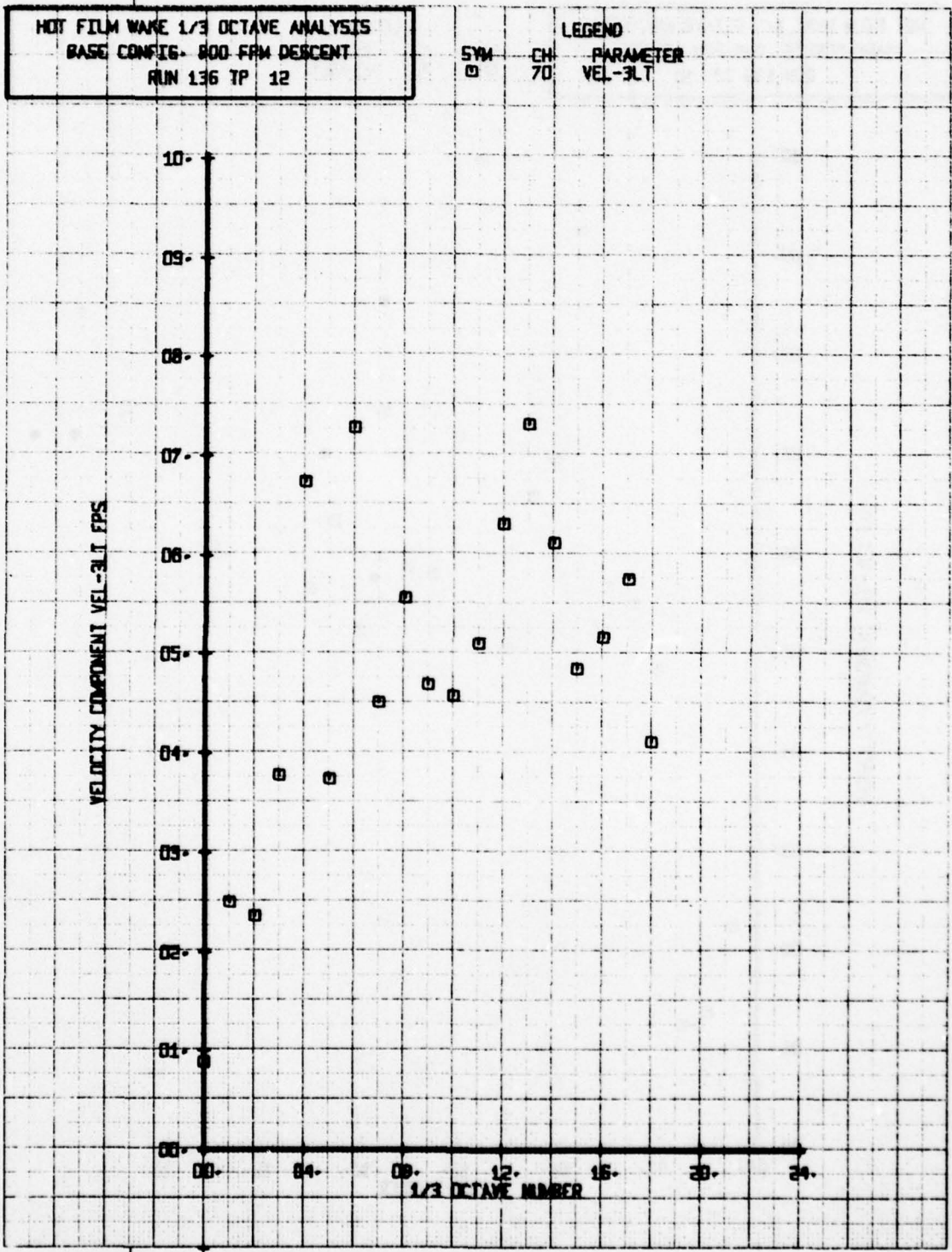












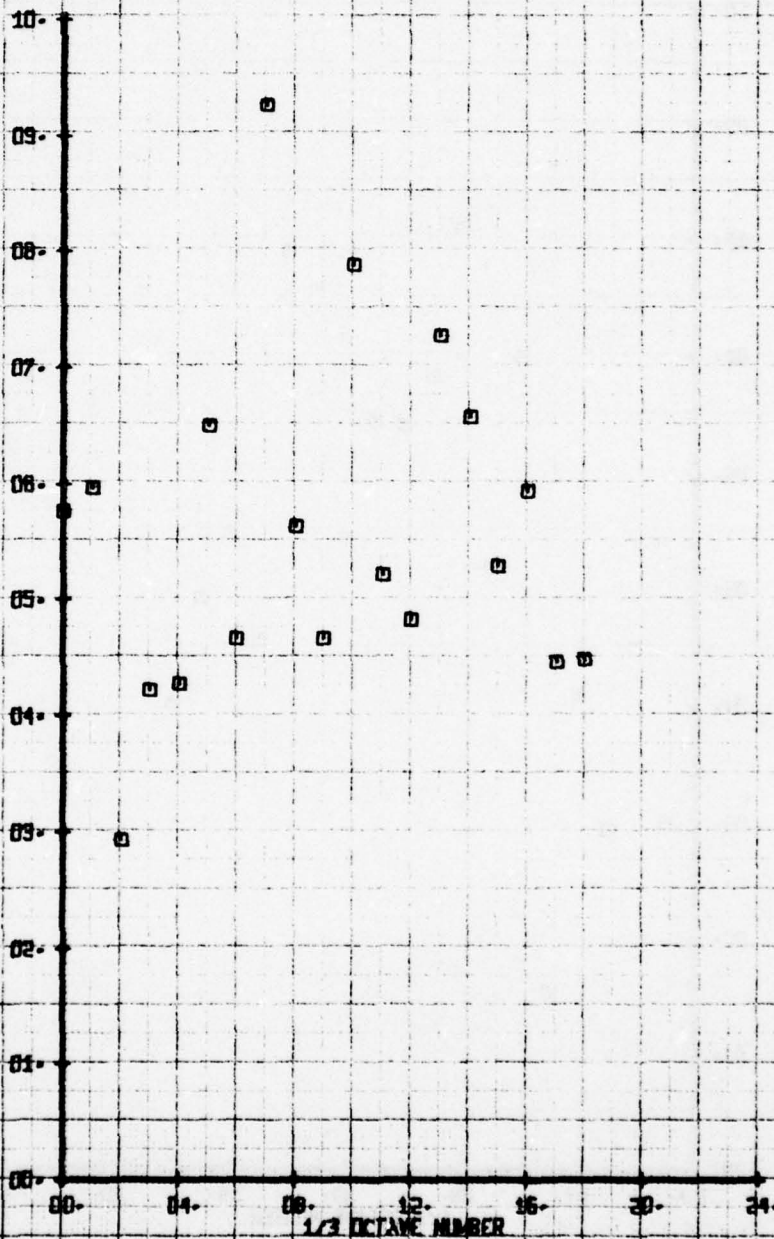
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DESCENT  
 RUN 136 TP 14

SYM  
 □

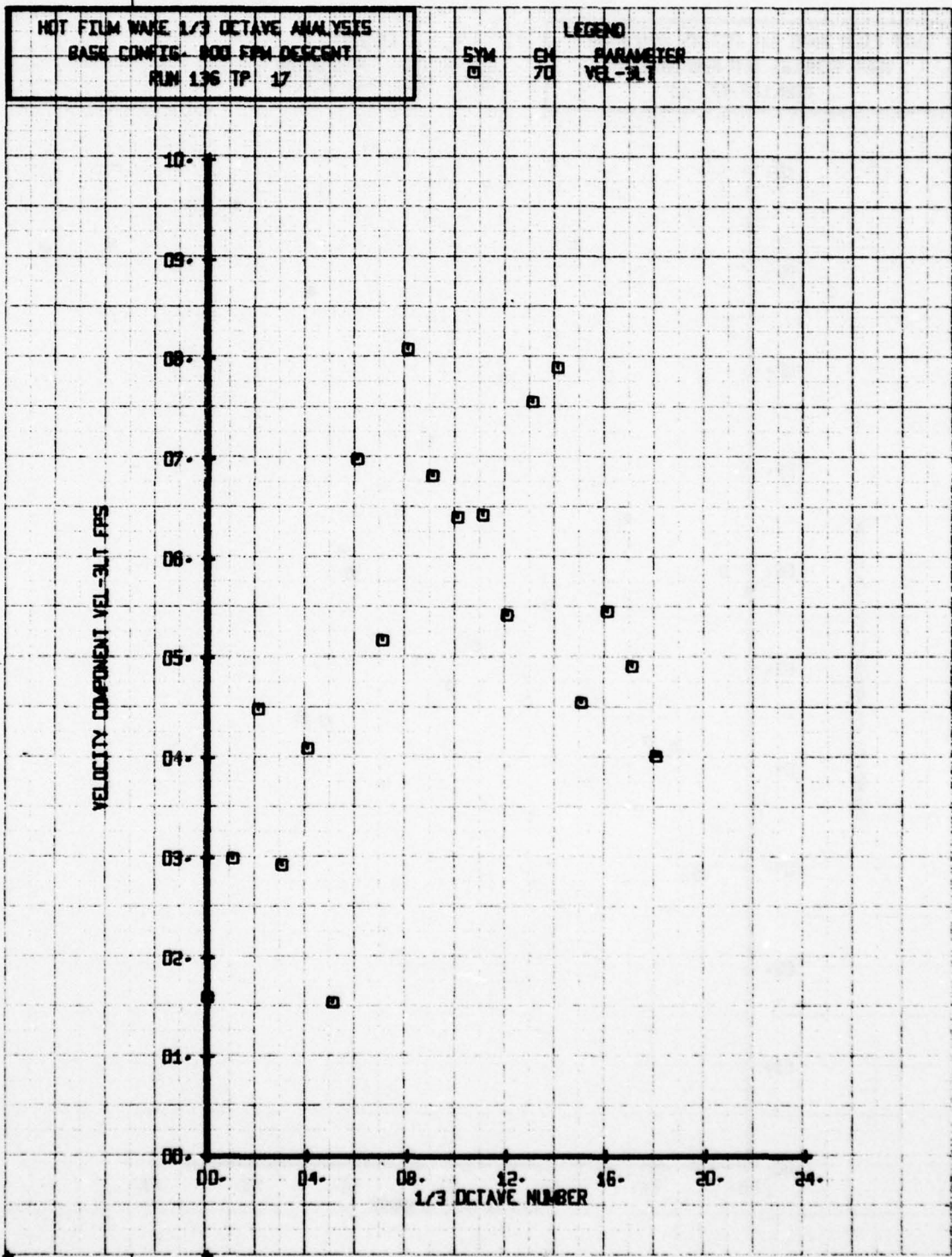
CH  
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LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

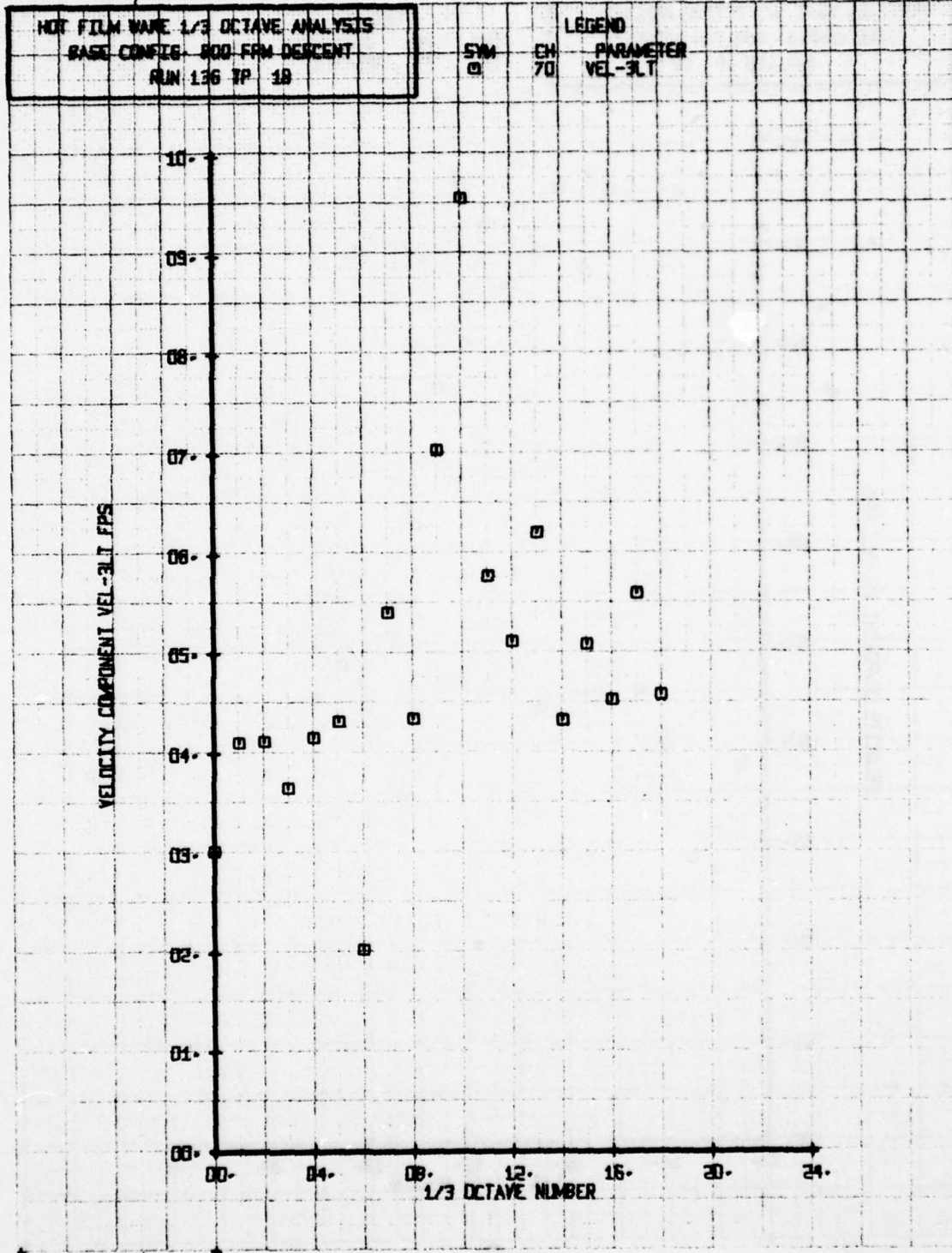


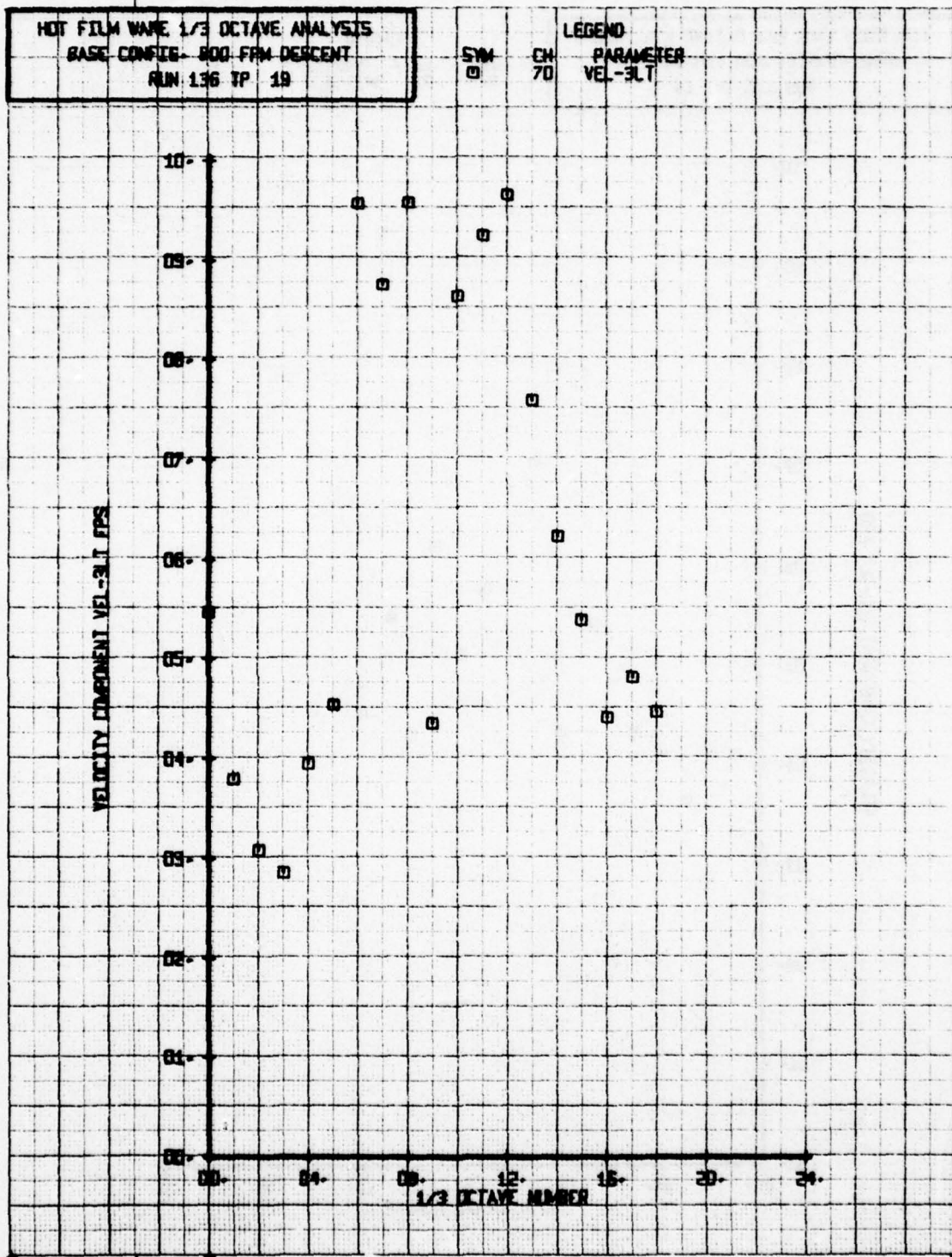




NOT FILM WARE 1/3 OCTAVE ANALYSIS  
 BASE CONFIG- 800 FPM DECENT  
 RUN 136 TP 18

SM CH PARAMETER  
 0 70 VEL-3LT

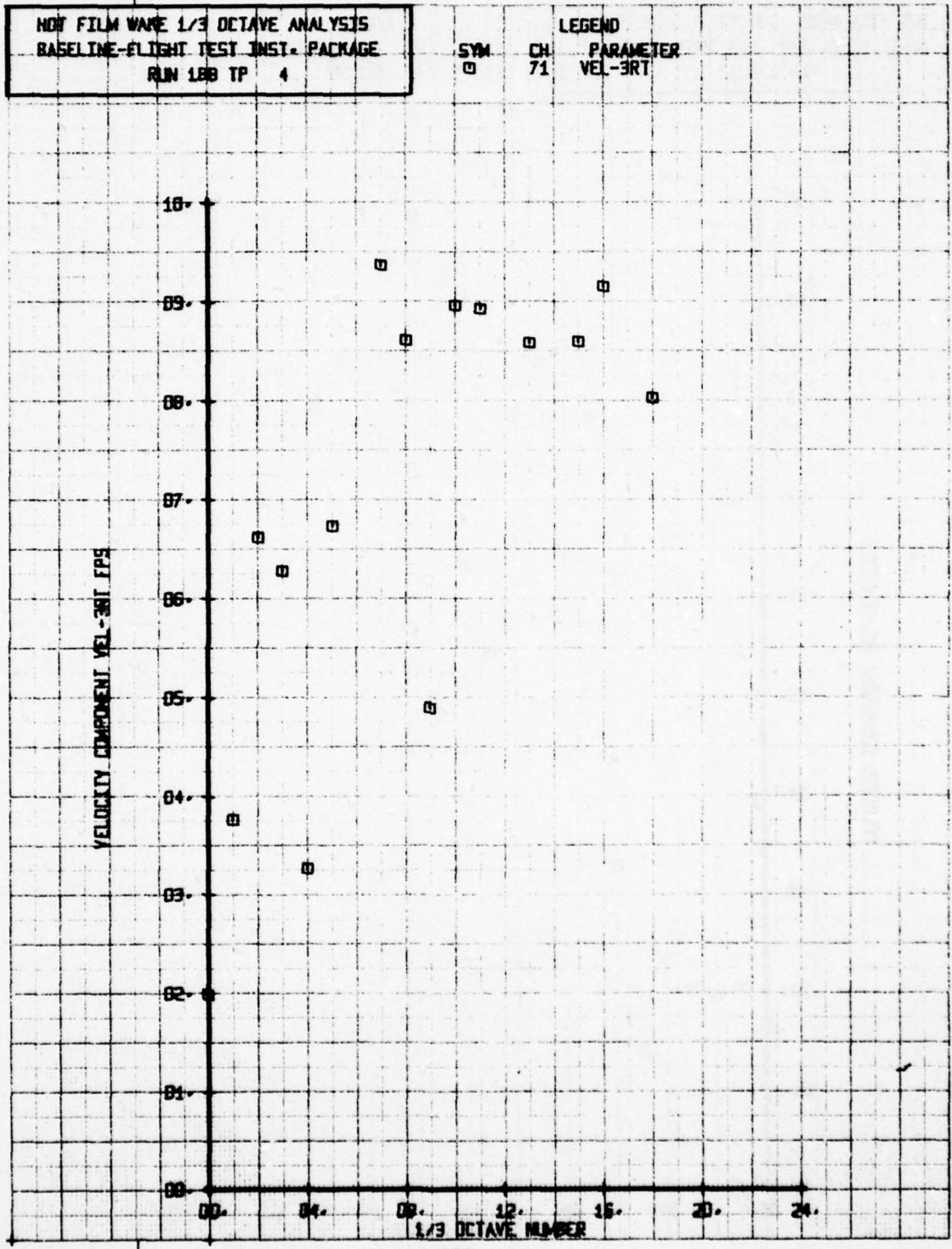






NOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 4

SYM CH PARAMETER  
 □ 71 VEL-3RT



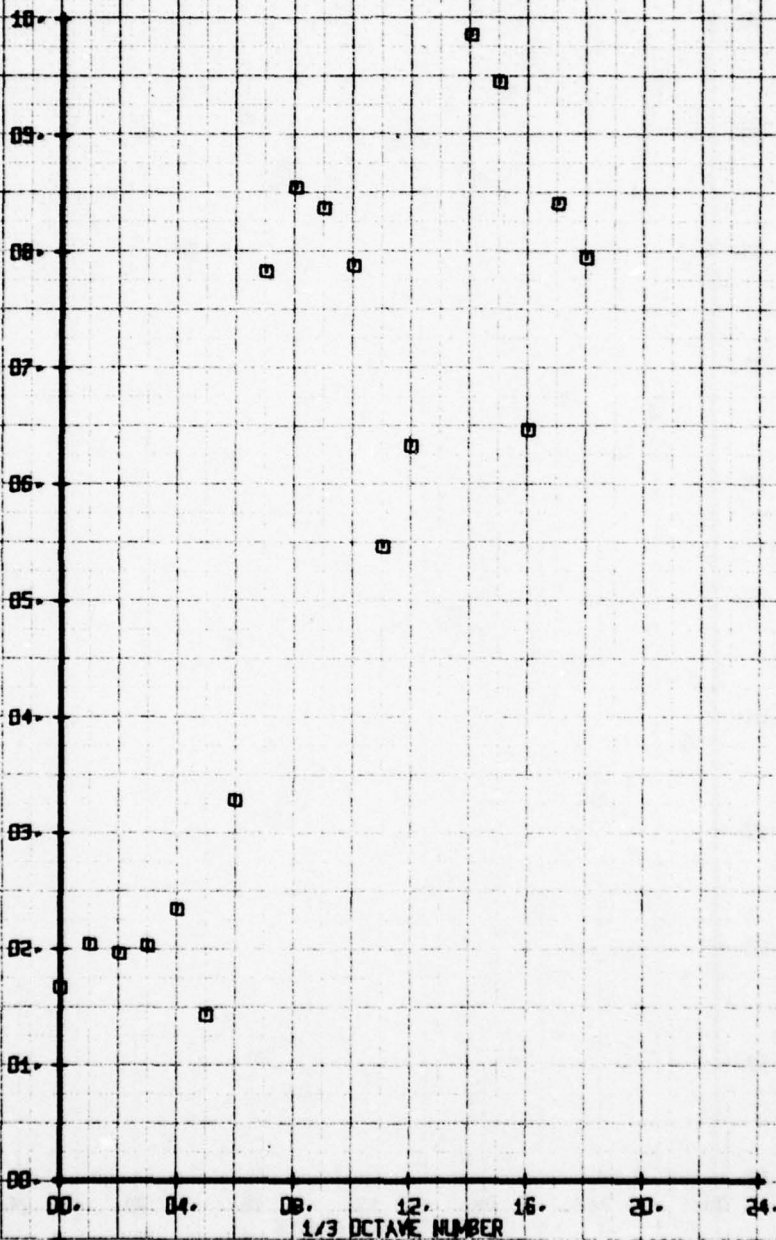
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 5

SYM  
 0

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

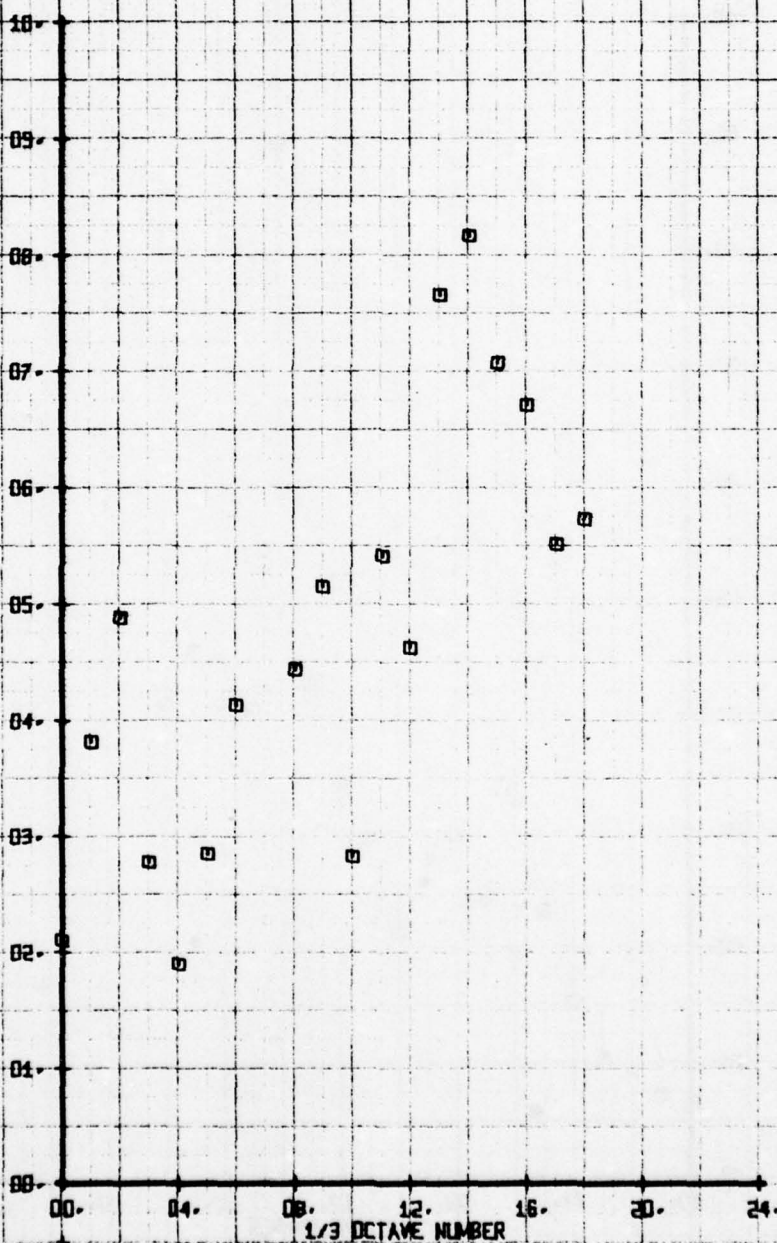


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 6

SYM  
 0

LEGEND  
 CH 71  
 PARAMETER  
 VEL-3RT

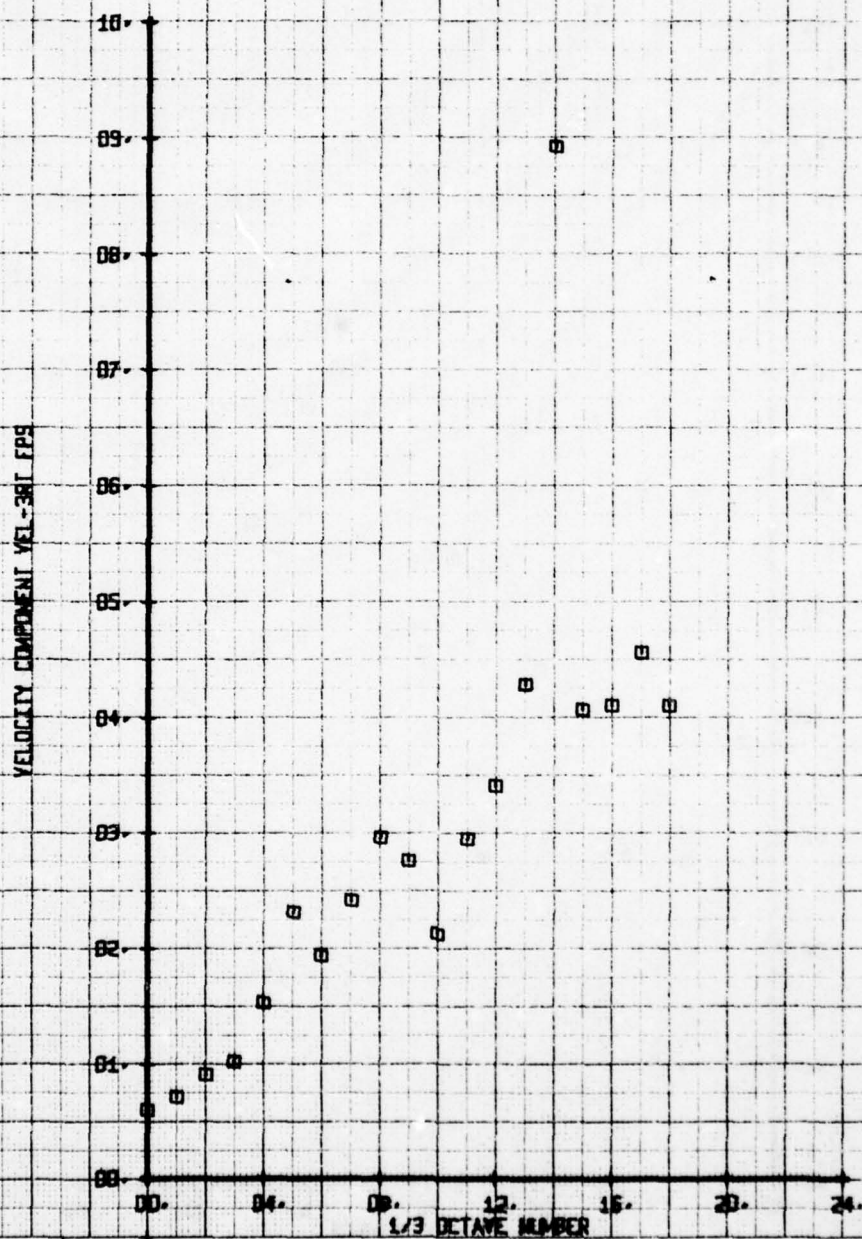
VELOCITY COMPONENT VEL-3RT FPS





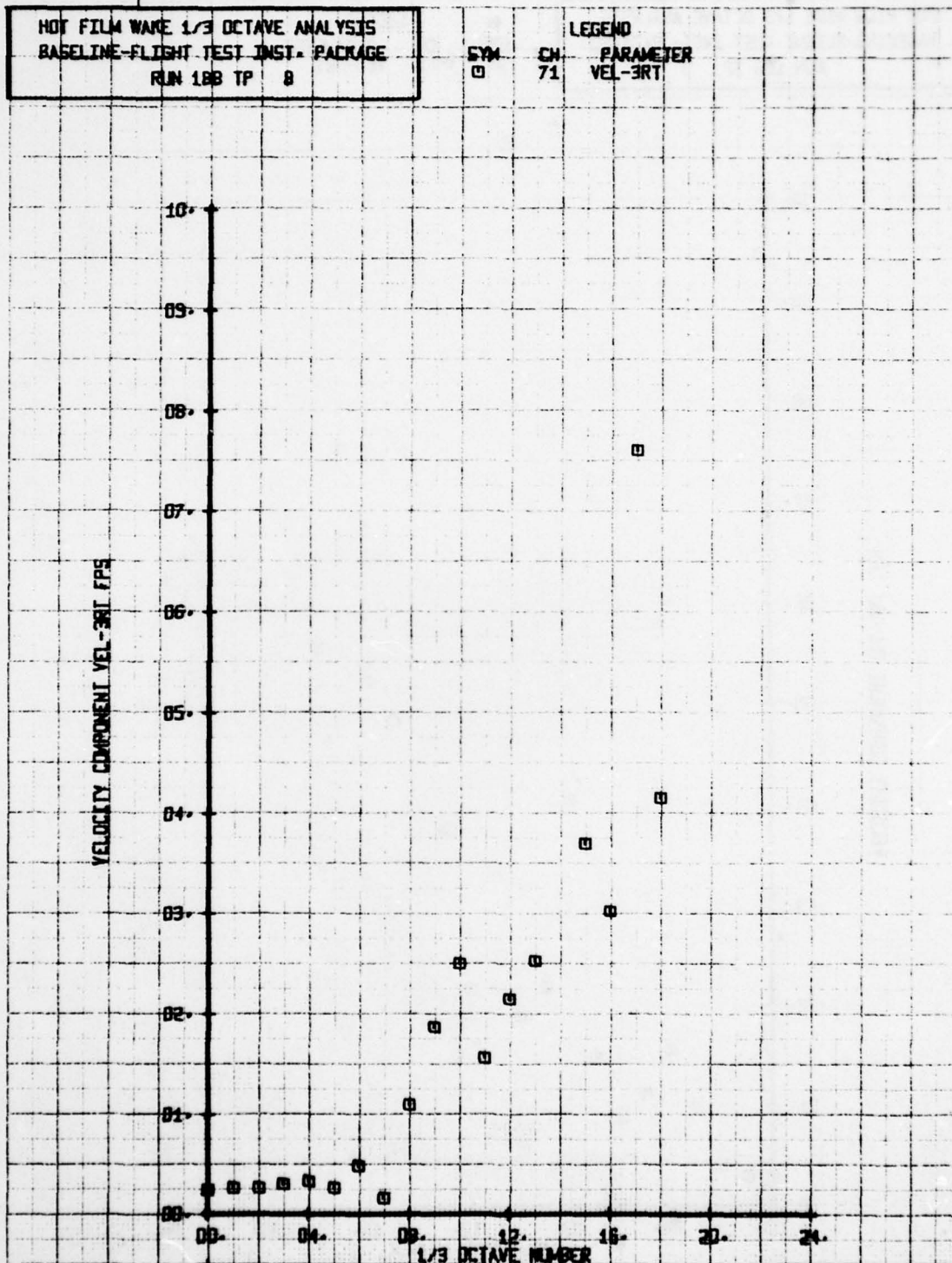
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 7

SYM	CH	LEGEND	PARAMETER
□	71		VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 8

SYN CH PARAMETER  
 □ 71 VEL-3RT



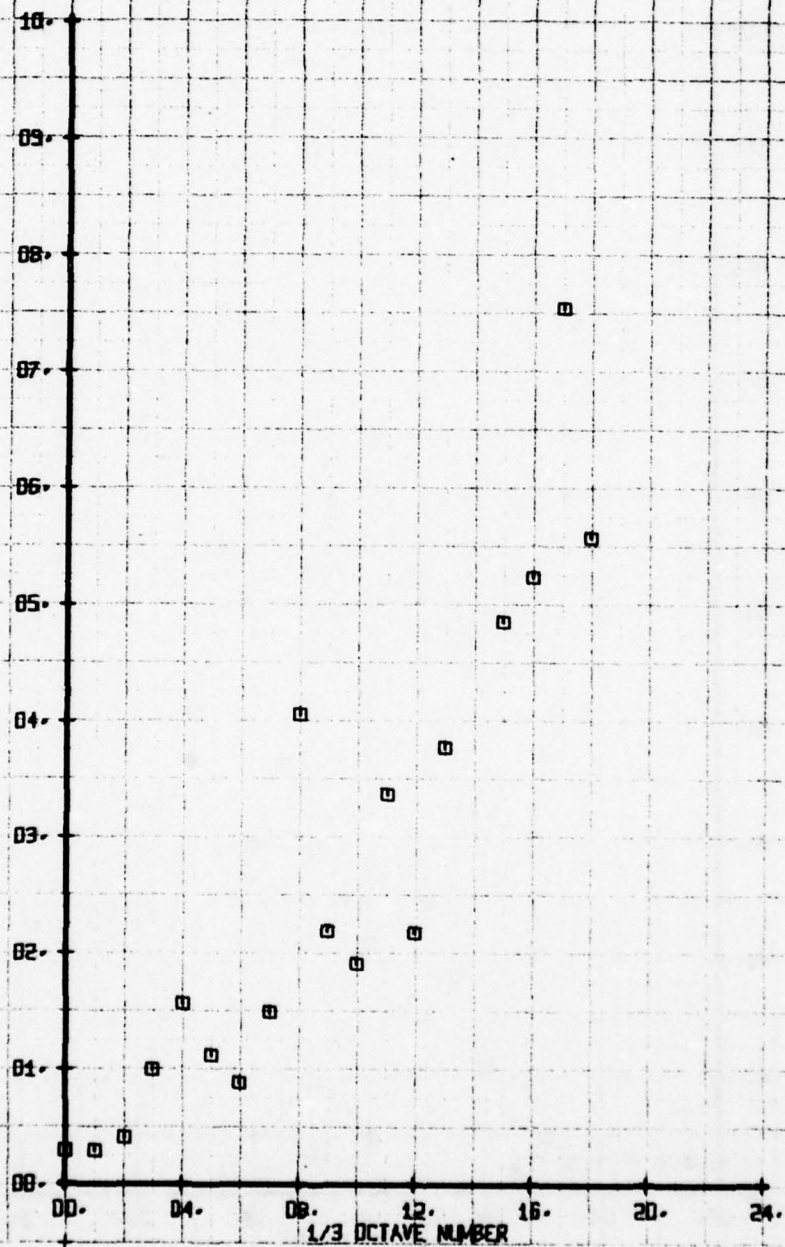
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASELINE-FLIGHT TEST INST. PACKAGE  
RUN 188 TP 9

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS





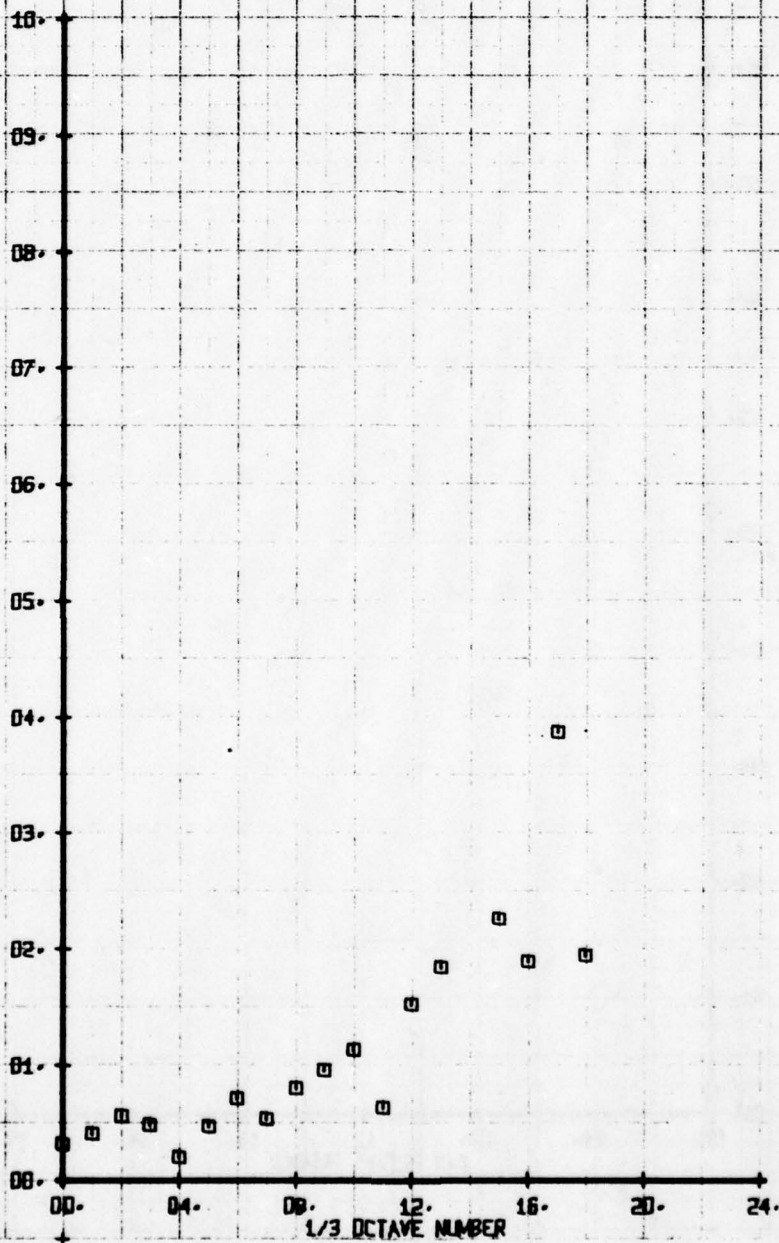
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASELINE-FLIGHT TEST INST. PACKAGE  
RUN 188 TP 10

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASELINE-FLIGHT TEST INST. PACKAGE  
RUN 188 TP 4

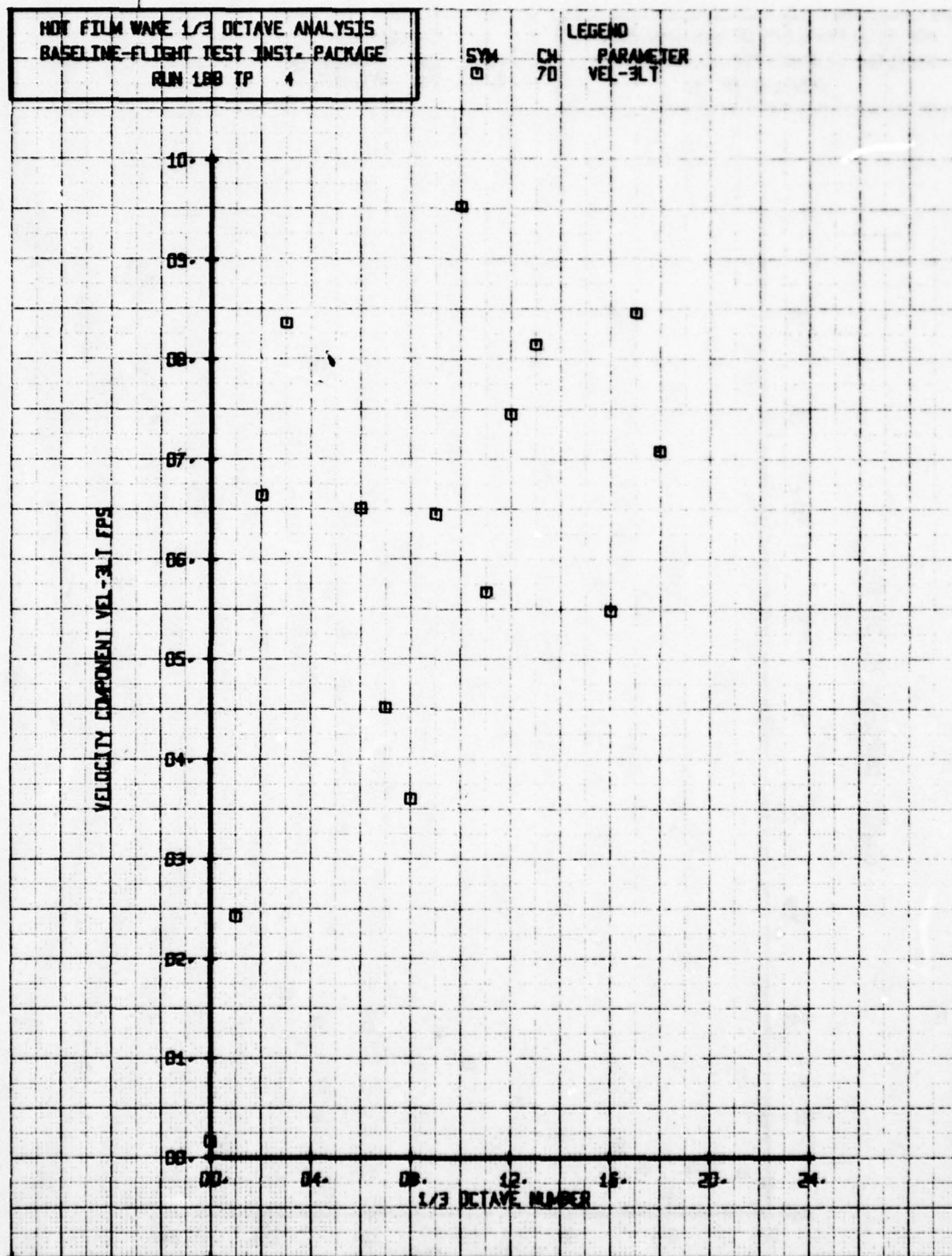
SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

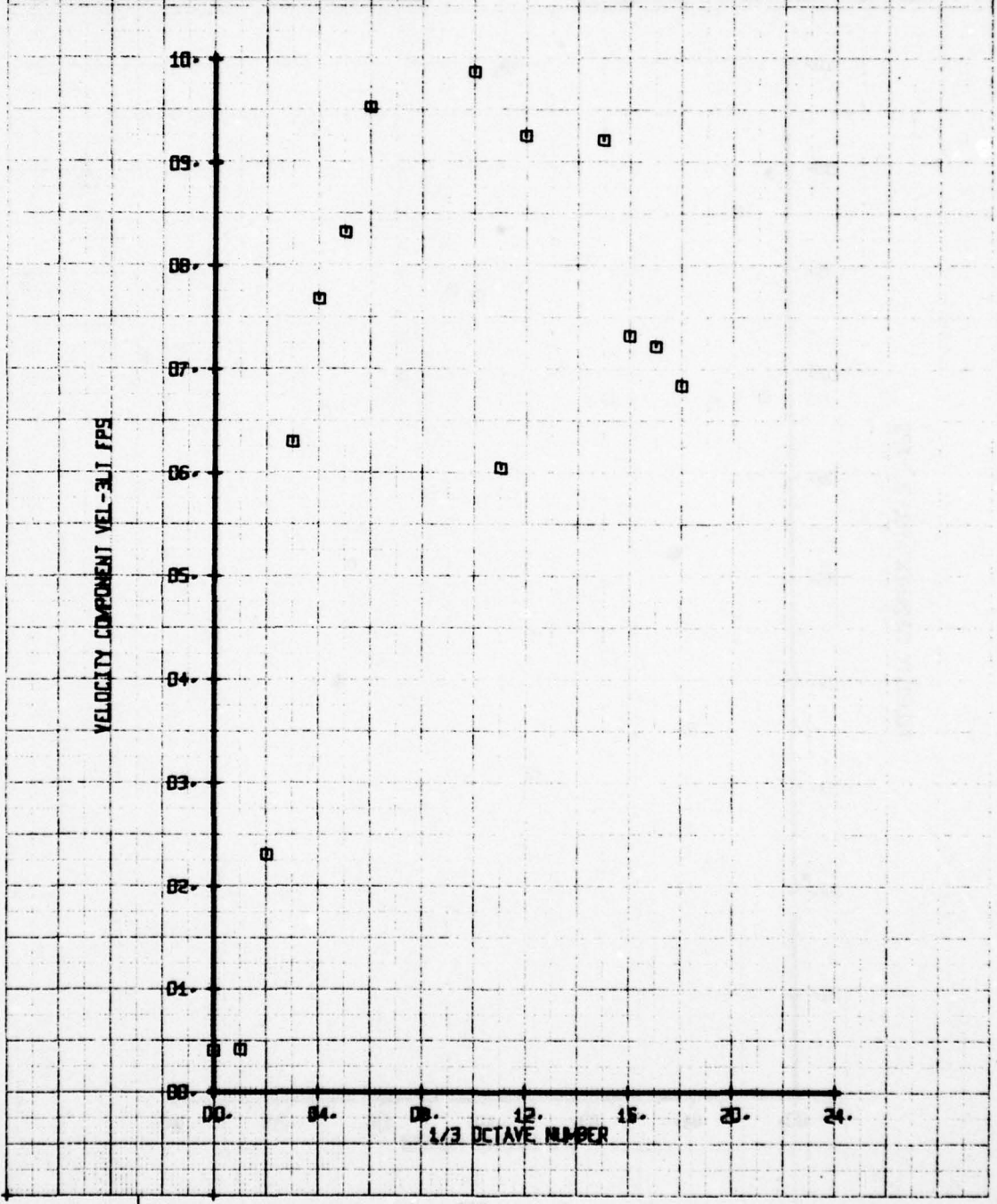
VELOCITY COMPONENT VEL-3LT FPS

1/3 OCTAVE NUMBER



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 5

SYN CH PARAMETER  
 0 70 VEL-3LT





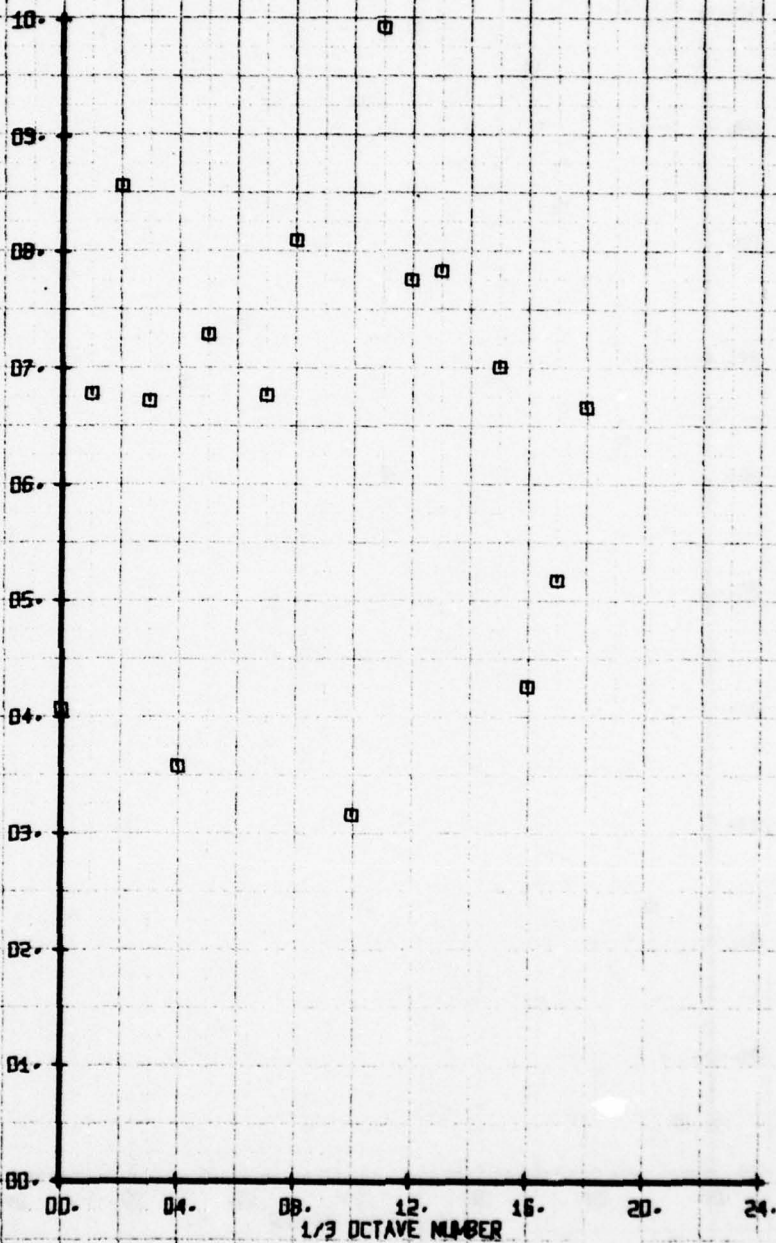
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 6

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

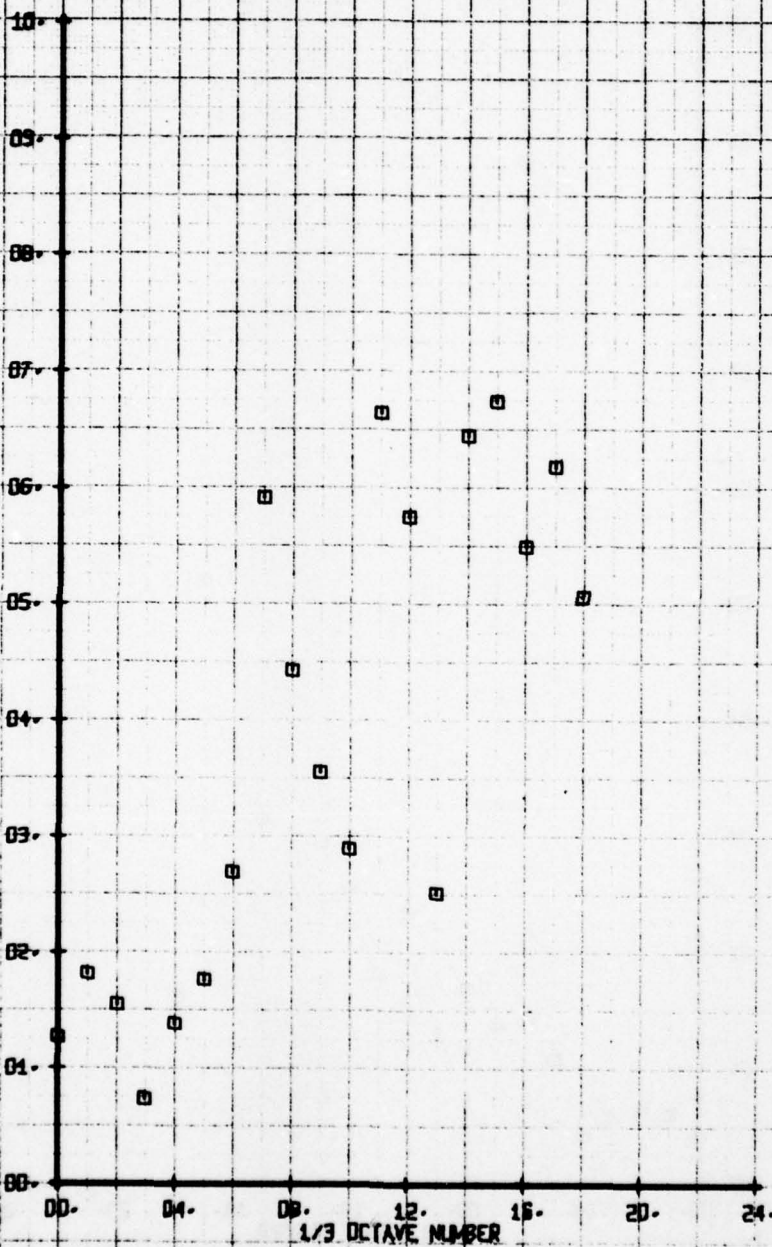


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP 7

SYM  
 □

LEGEND  
 CH 70  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



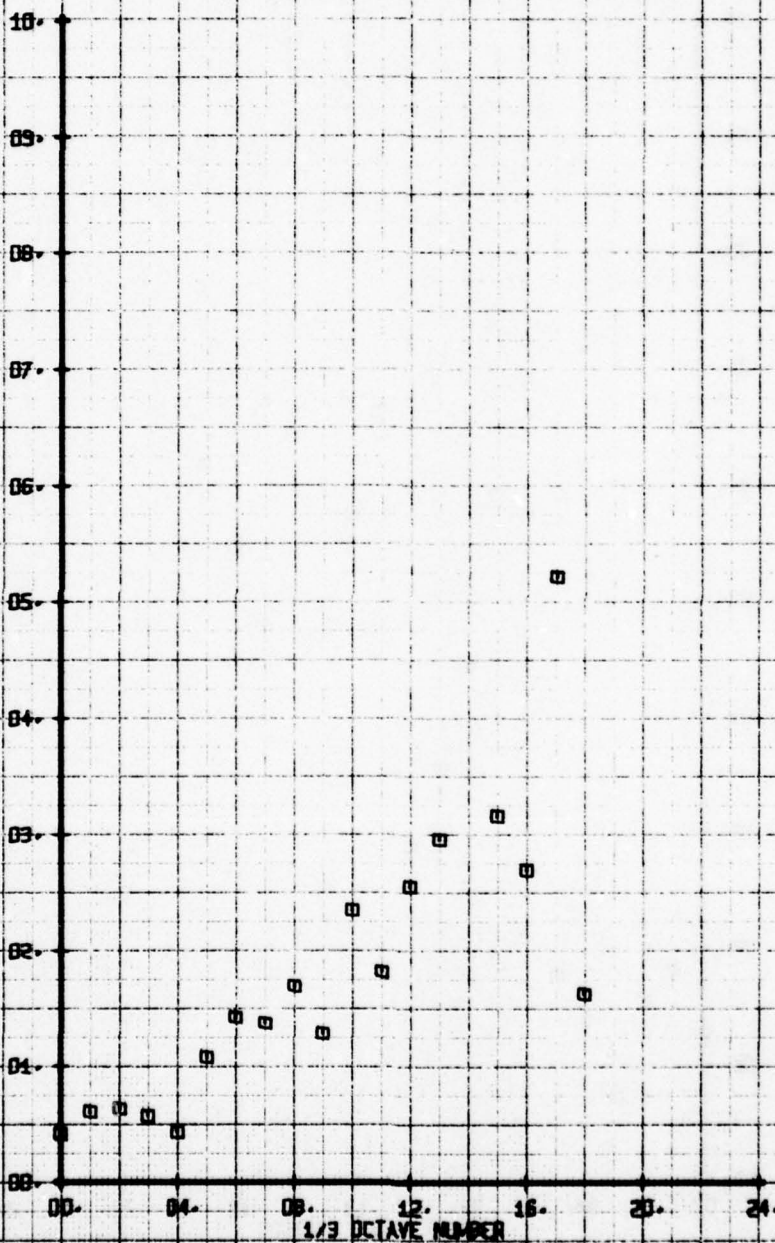
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 BASELINE-FLIGHT TEST INST. PACKAGE  
 RUN 188 TP B

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASELINE-FLIGHT TEST INST. PACKAGE  
RUN 188 TP 9

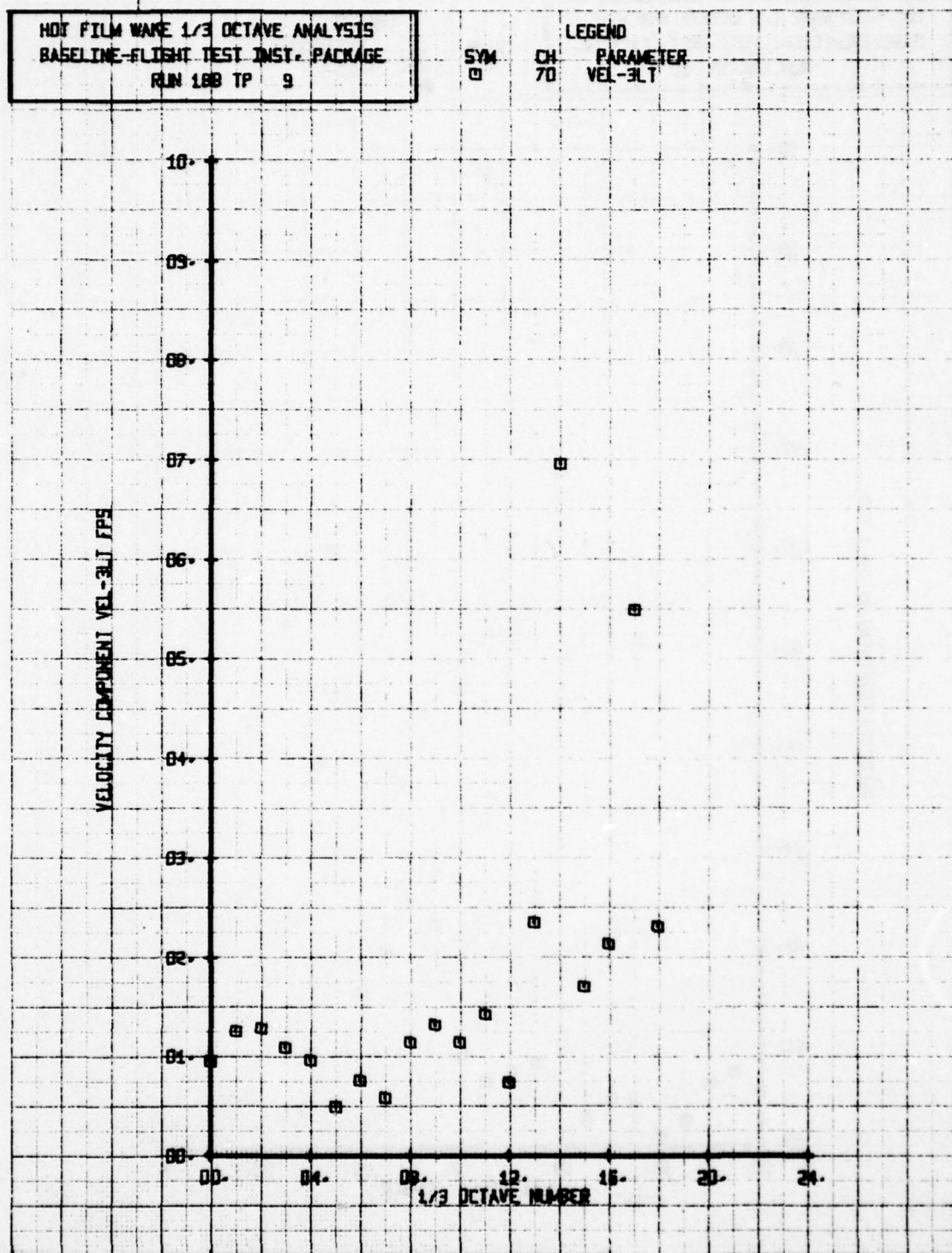
SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

1/3 OCTAVE NUMBER



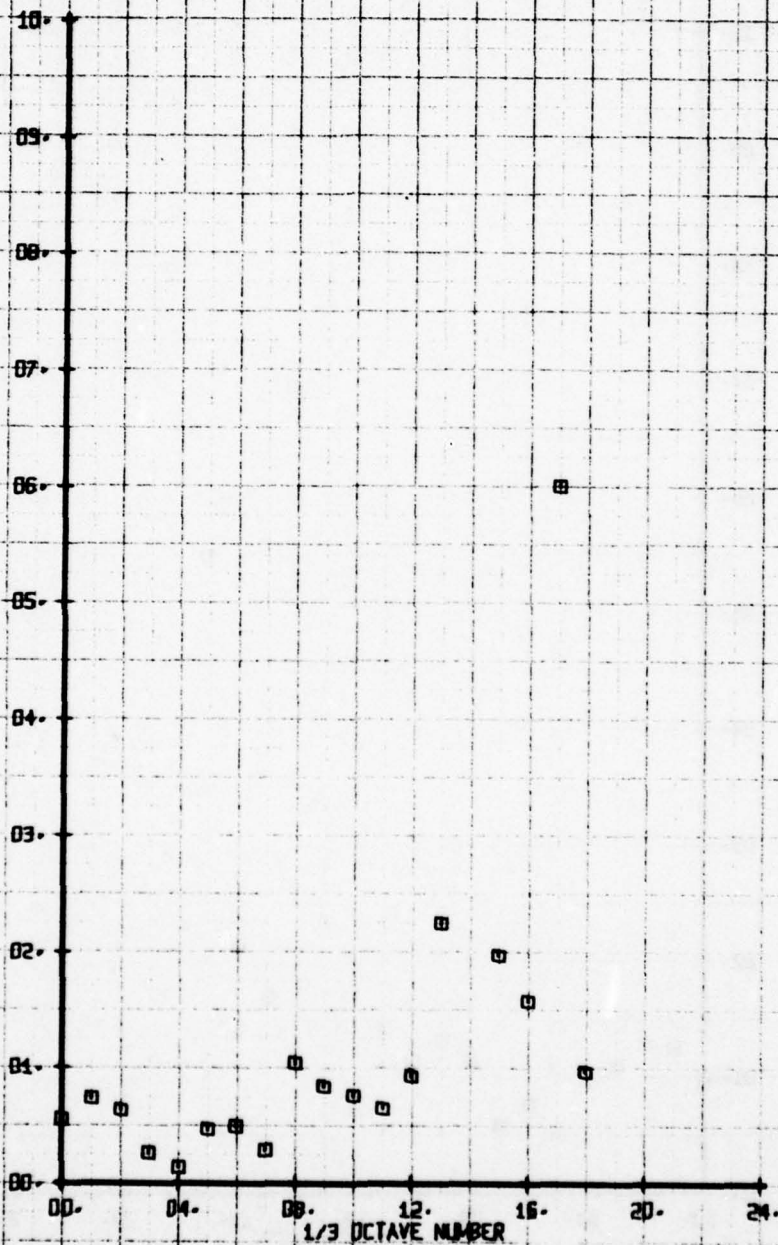
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
BASELINE-FLIGHT TEST INST. PACKAGE  
RUN 188 TP 10

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



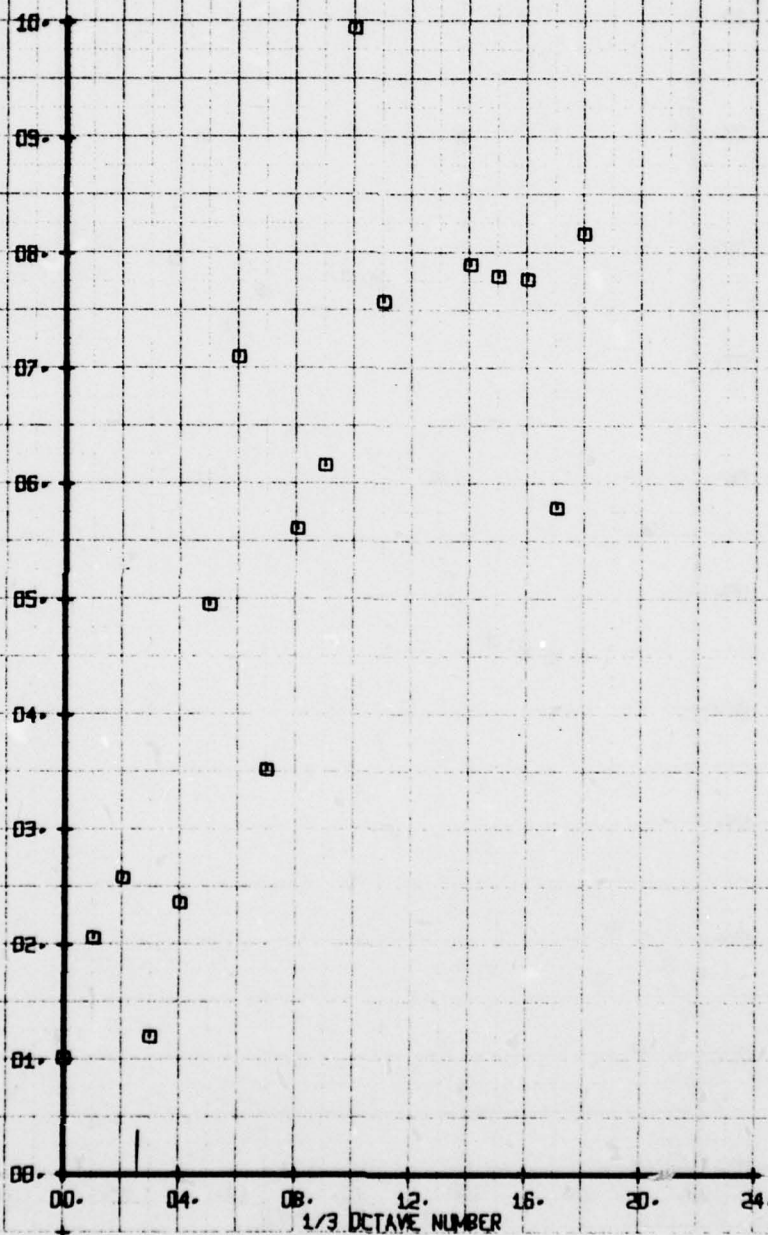
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UROY 100.2-050. BLOS  
 RUN 211 TP 2

SYM  
 □

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

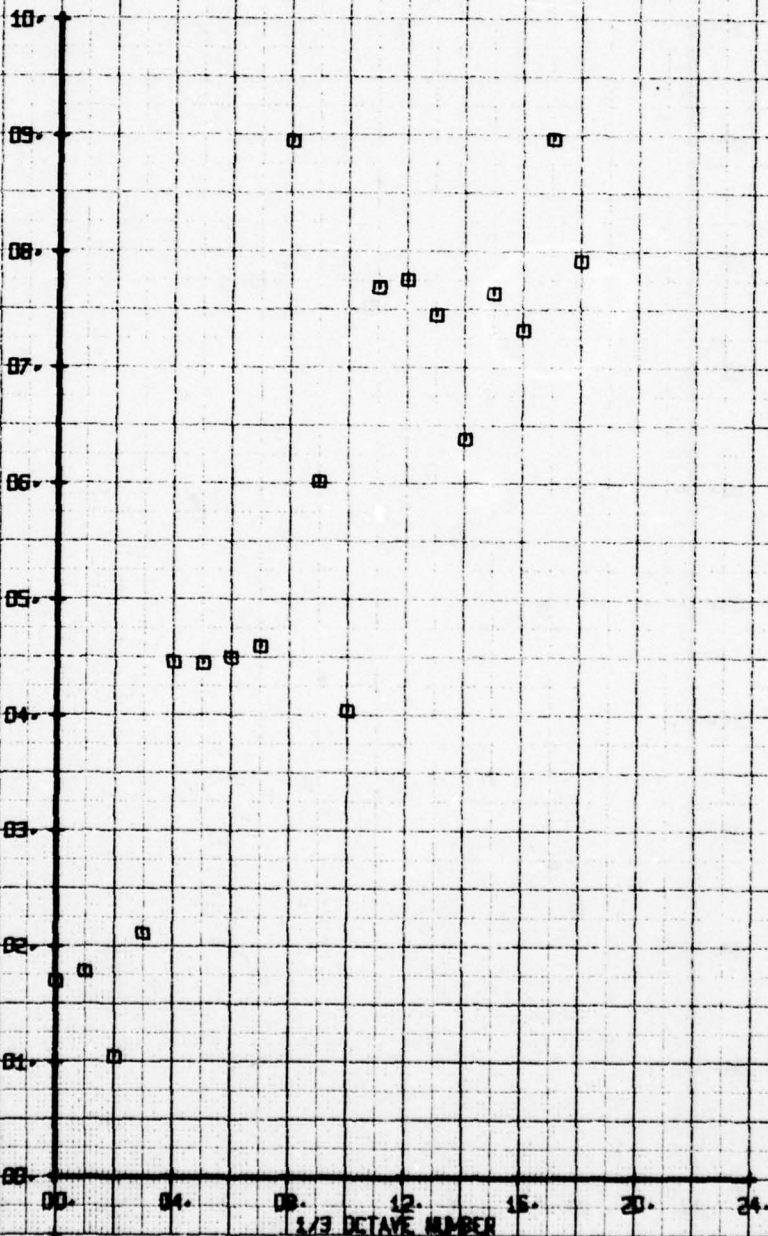




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBODY 100.2-050.8 BLOS  
 RUN 211 TP 3

SYM	CH	LEGEND
□	71	PARAMETER VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



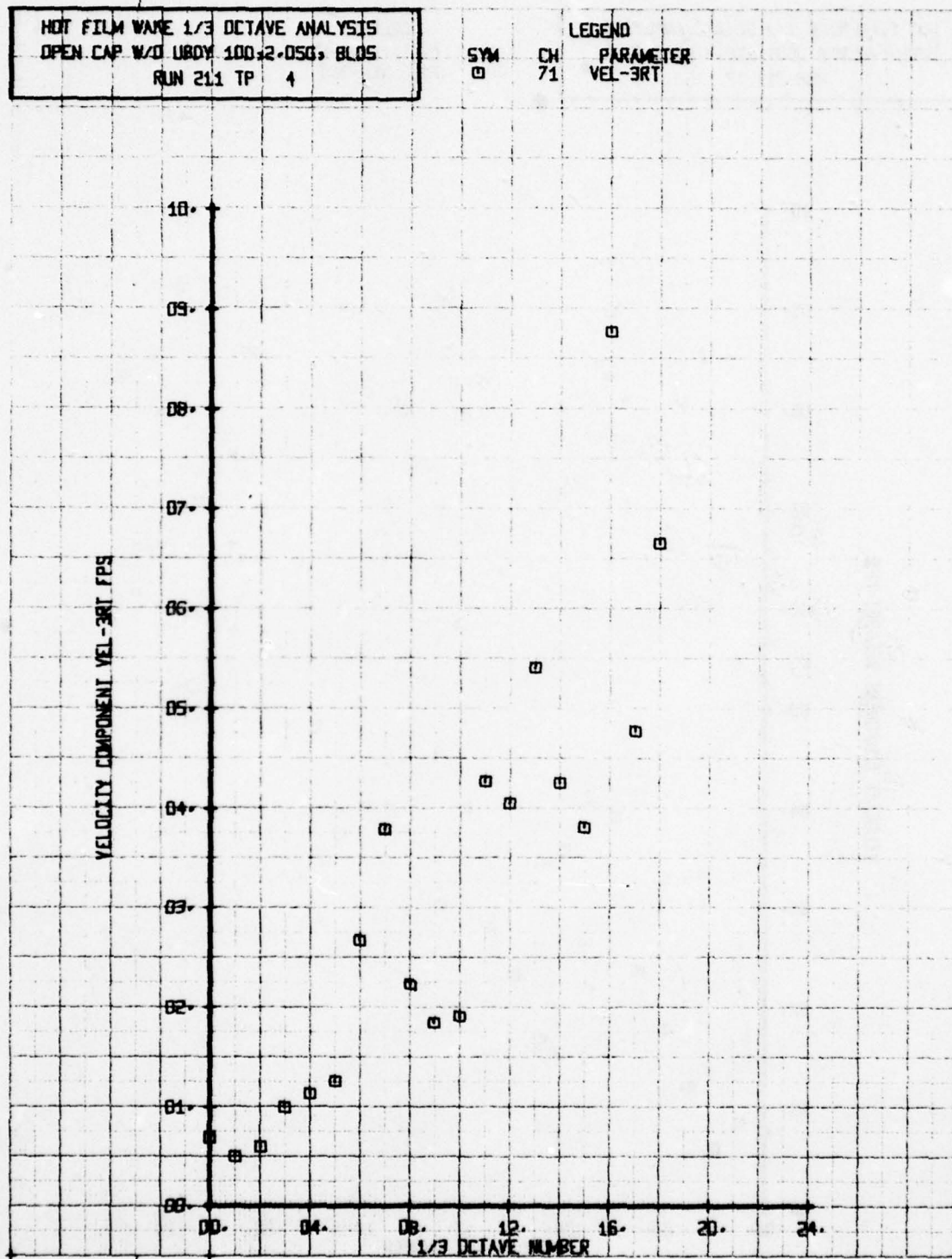
1/3 OCTAVE NUMBER

HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBODY 100-2-05G, BLOS  
RUN 211 TP 4

SYM  
□

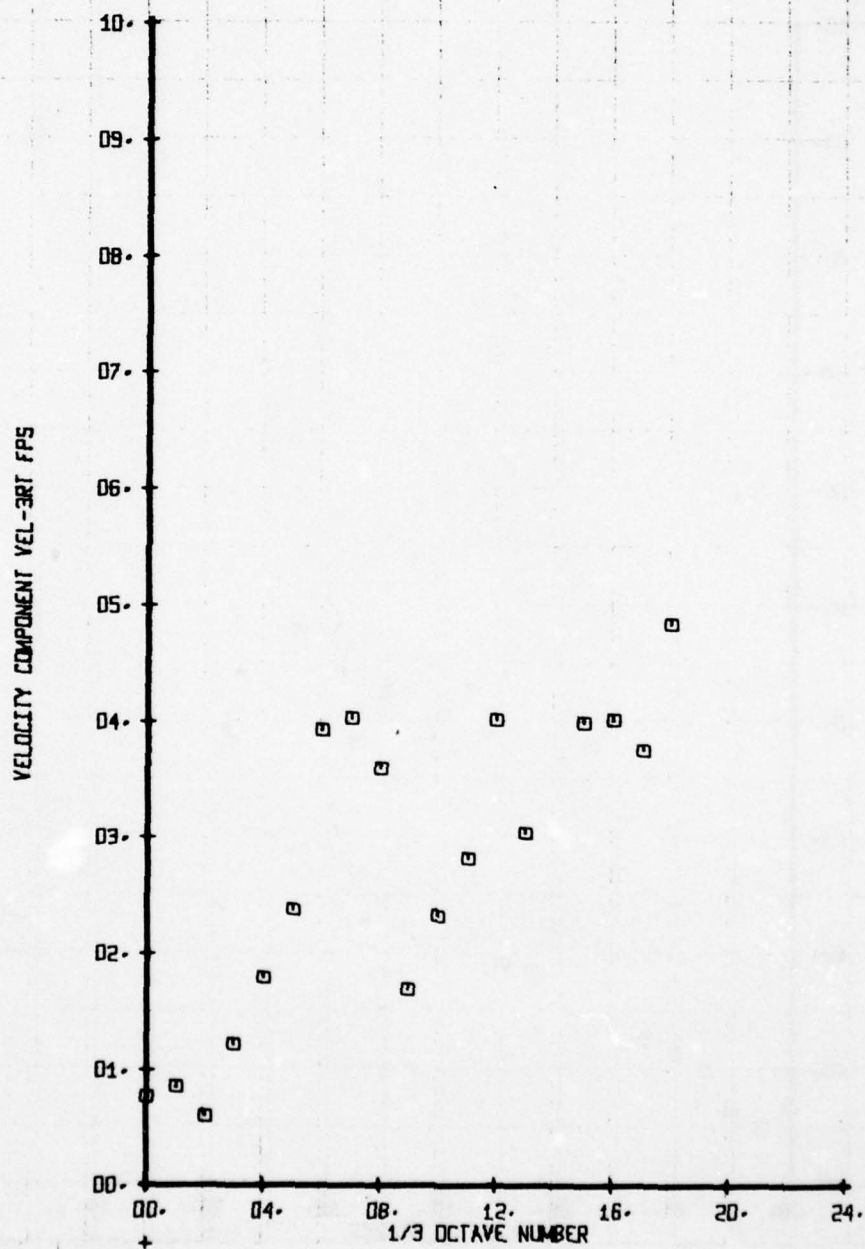
CH  
71

LEGEND  
PARAMETER  
VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 100.2.056. BLOS  
 RUN 211 TP 5

LEGEND		
SYM	CH	PARAMETER
□	71	VEL-3RT

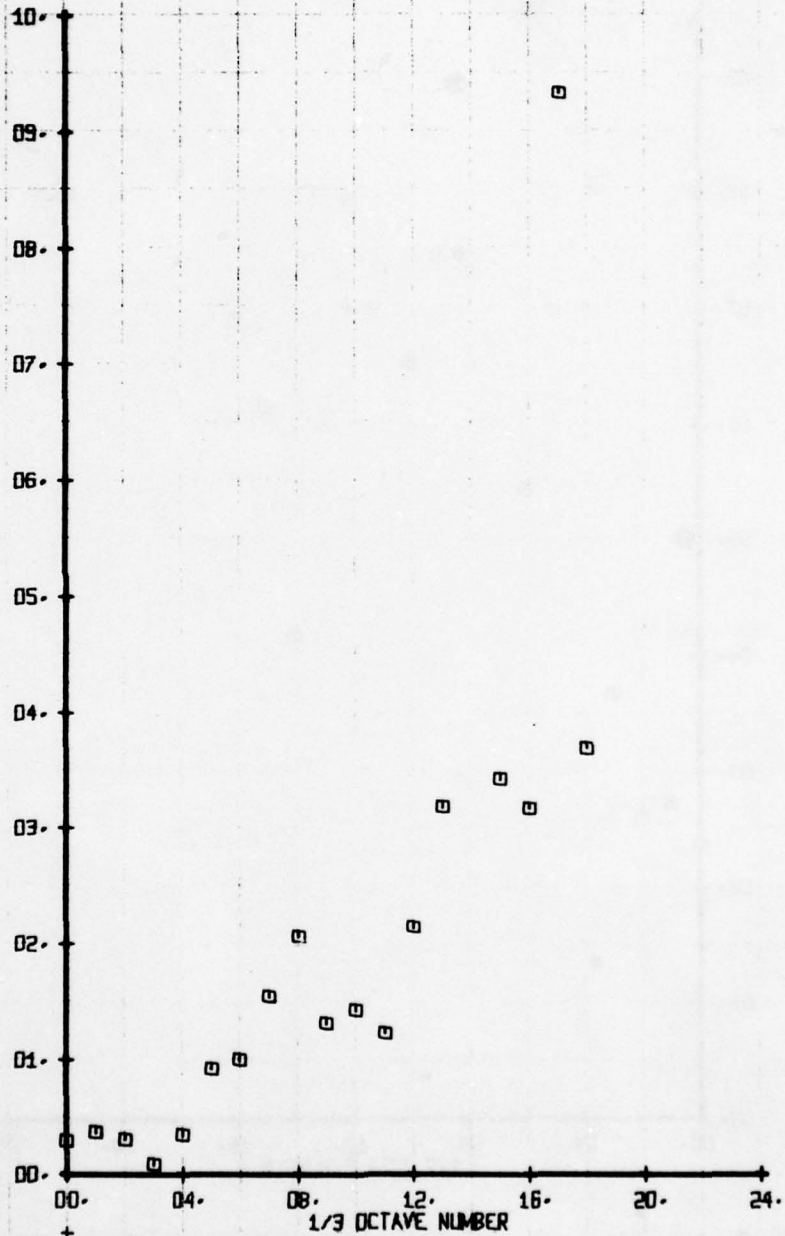




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O BODY 100, 2, 050, BLOS  
 RUN 211 TP 6

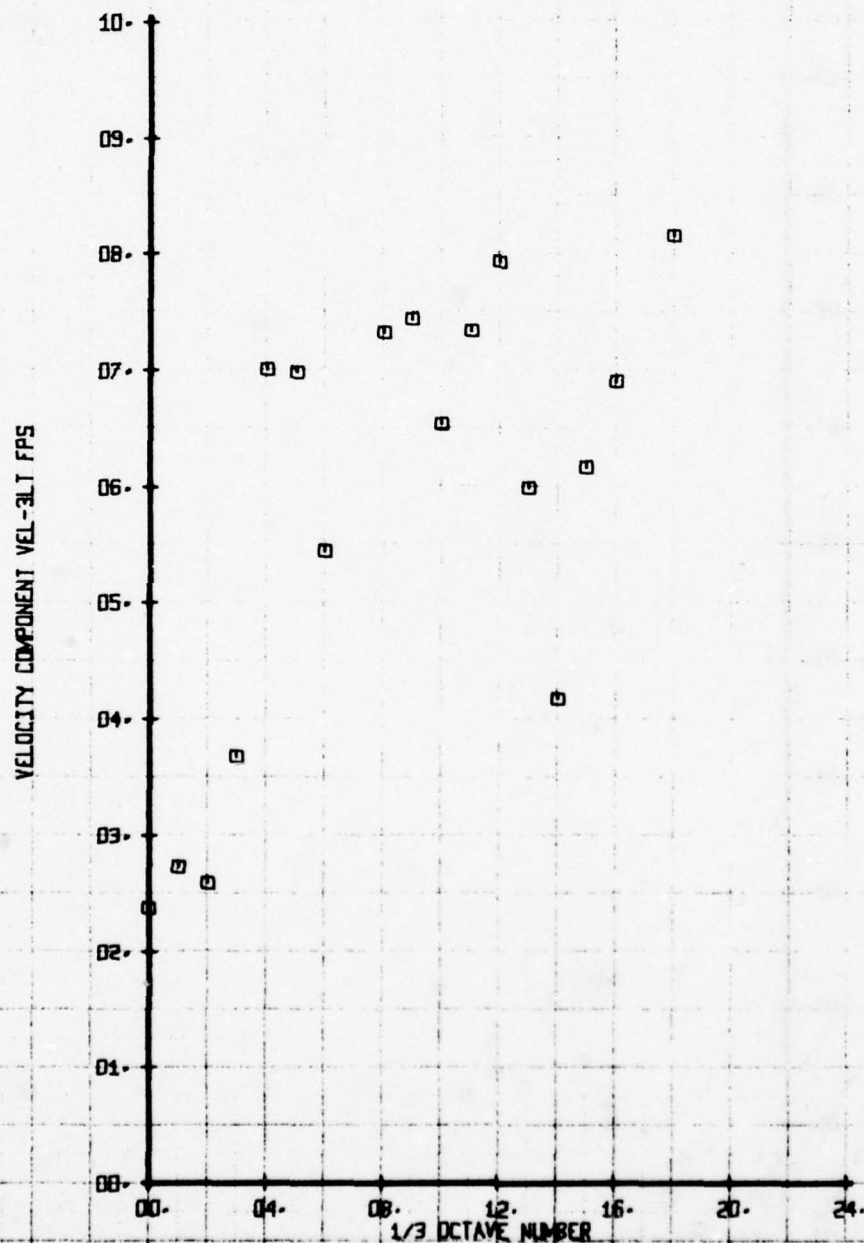
SYM CH PARAMETER  
 □ 71 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



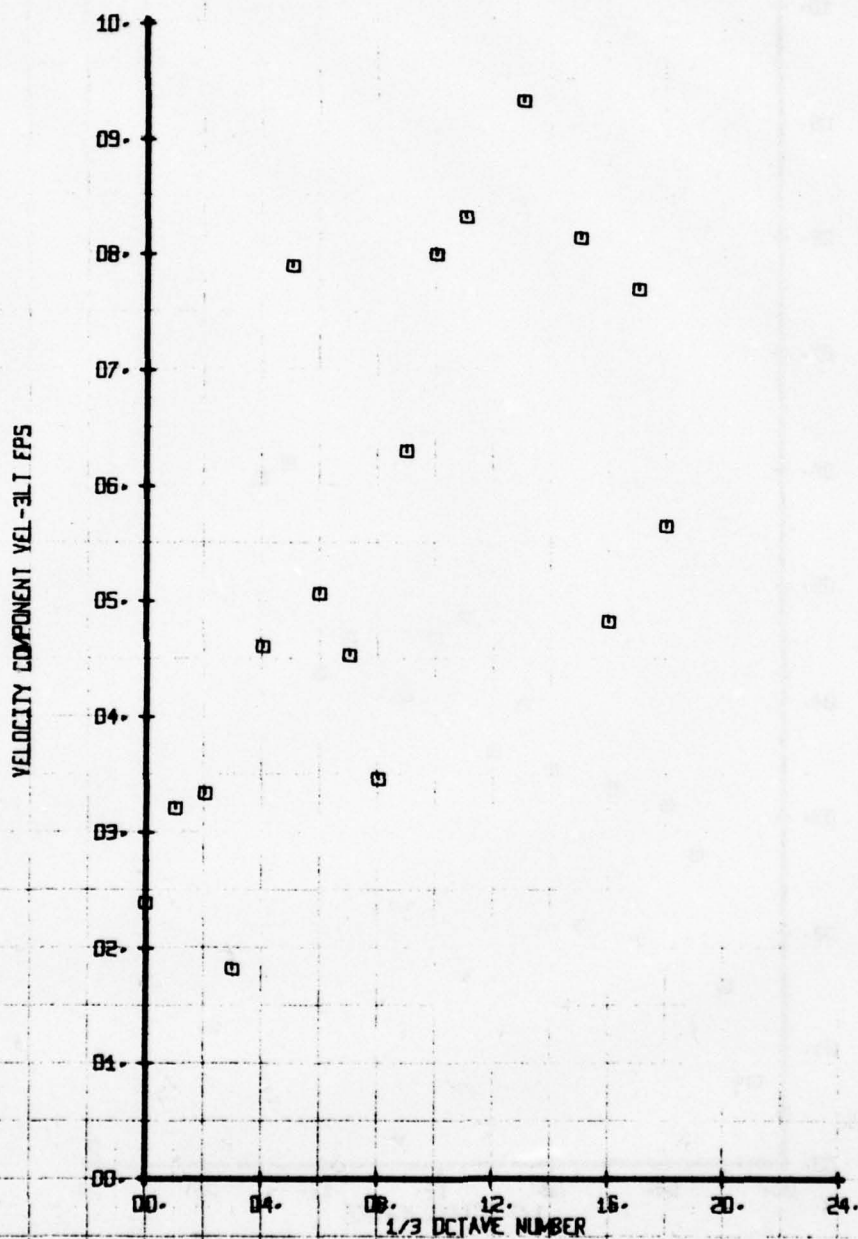
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBODY 100,2-050, BLOS  
 RUN 211 TP 2

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 100,2-DSG, BLOS  
 RUN 211 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT





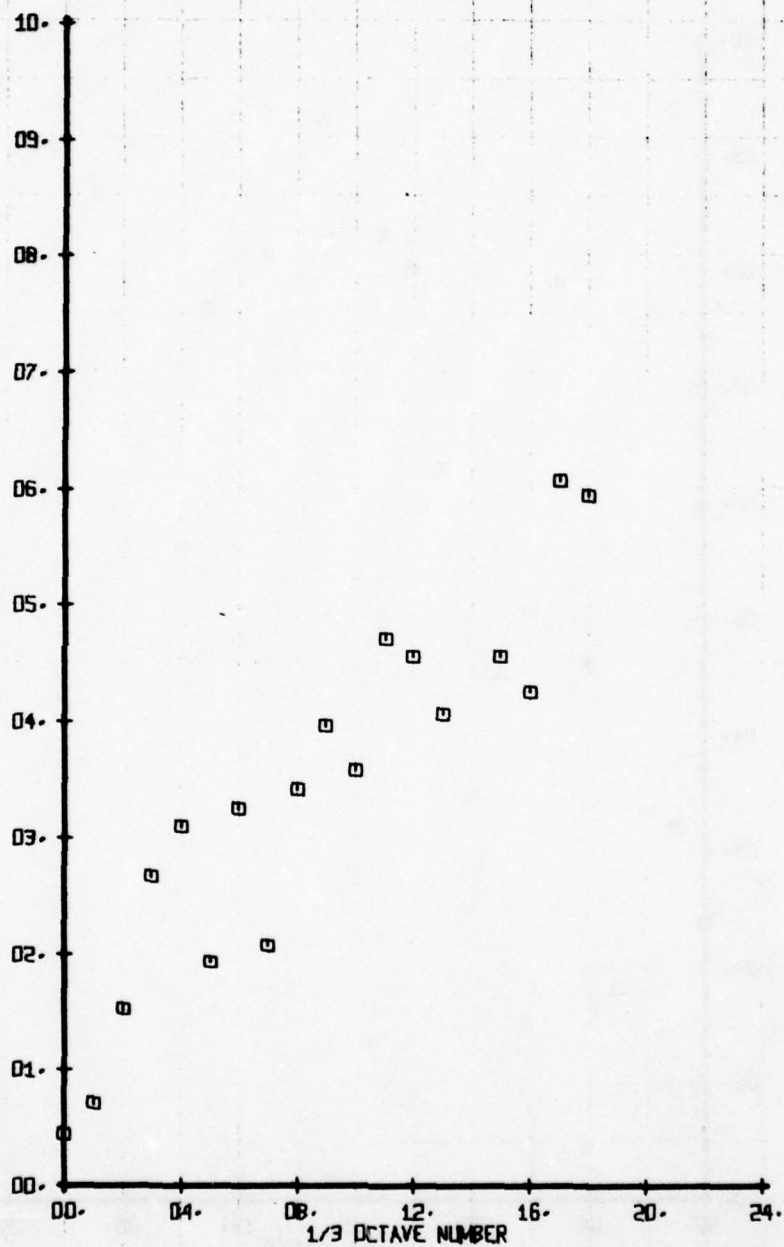
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBQY 100, 2-05G, BLOS  
 RUN 211 TP 4

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



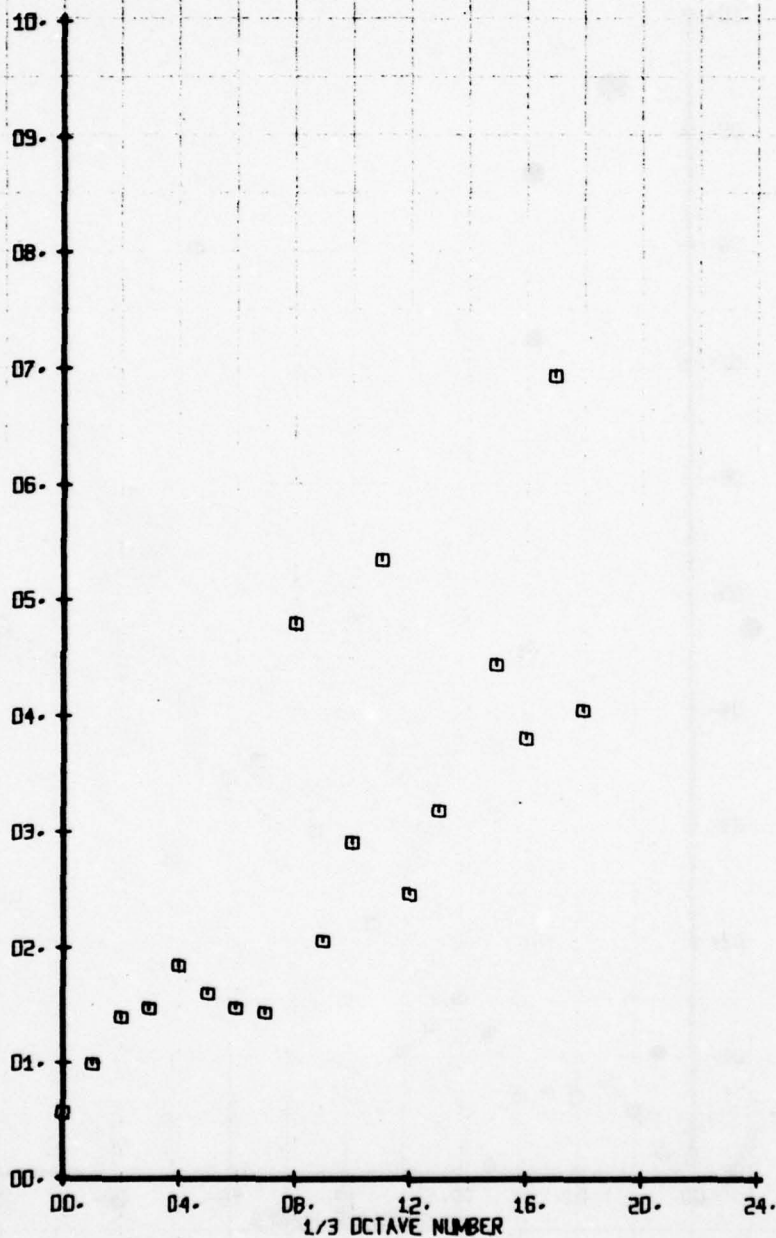
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/D UBDY 100.2-050. BLOS  
 RUN 211 TP 5

SYM  
 □

CH  
 70

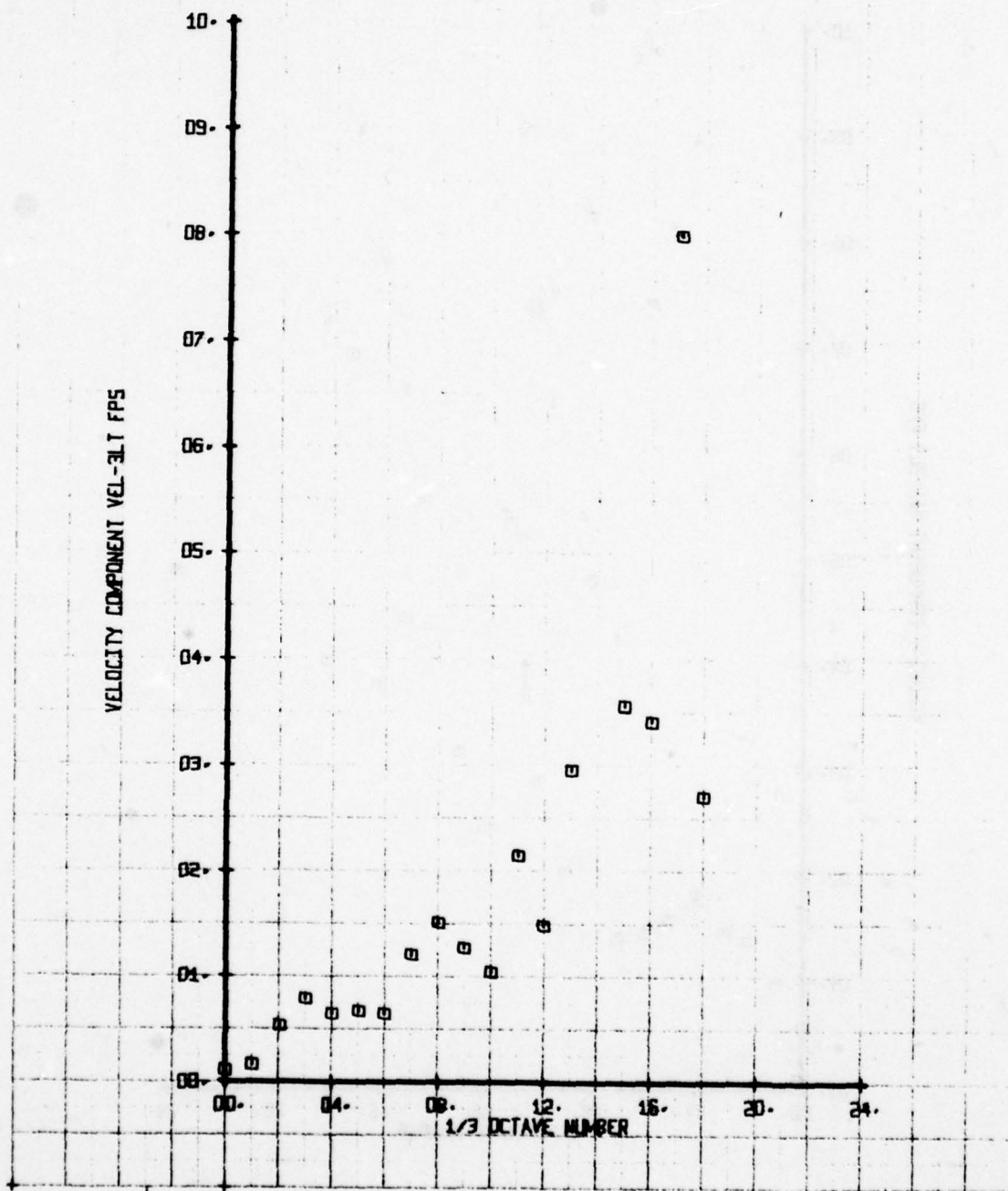
LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 100,2-DSG, BLOS  
 RUN 211 TP 6

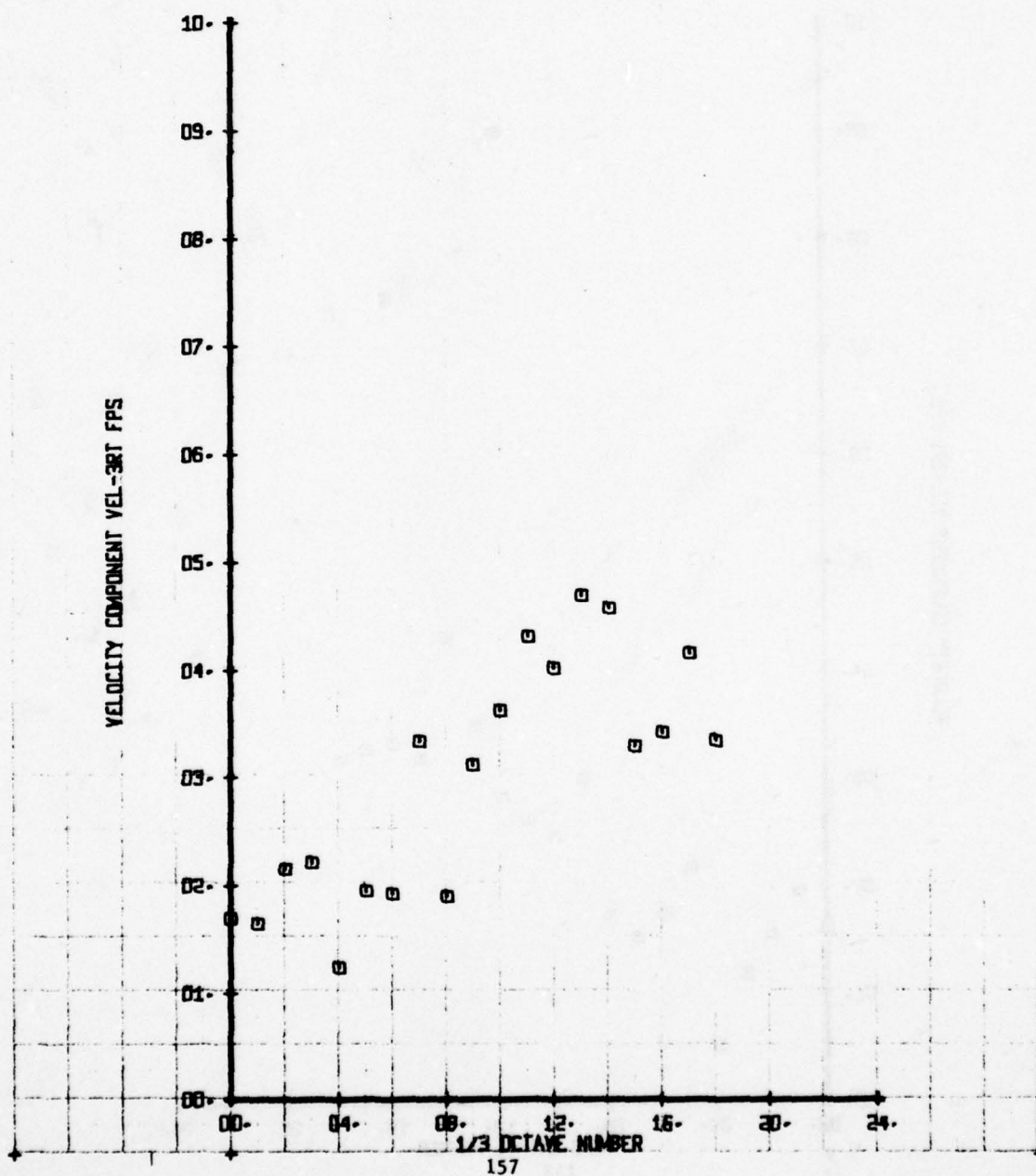
LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBODY 160- 2-DGP BLOS  
RUN 168 TP 4

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



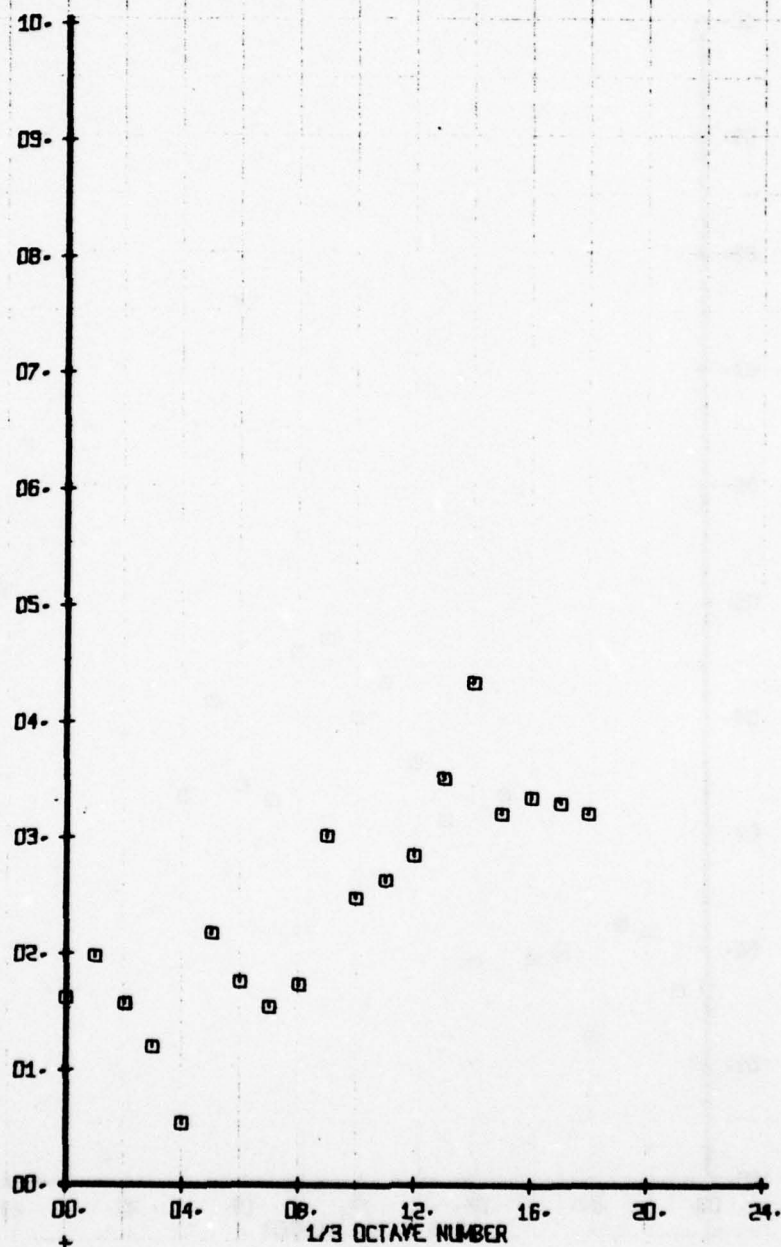
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBDY 160- 2-0GP BLOS  
RUN 168 TP 5

SYM  
0

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



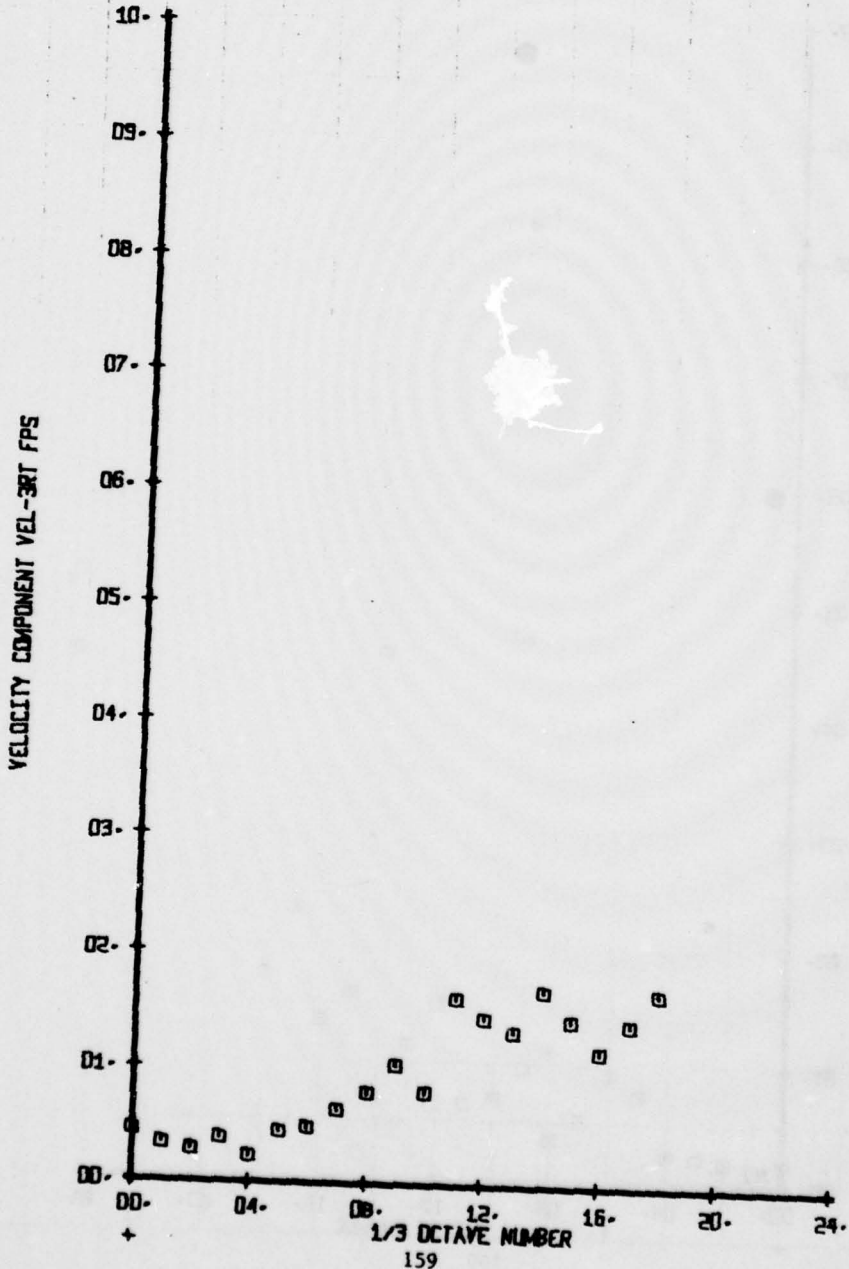
1/3 OCTAVE NUMBER

HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160- 2-DGP BLOS  
 RUN 168 TP 6

SYM  
 □

CH  
 71

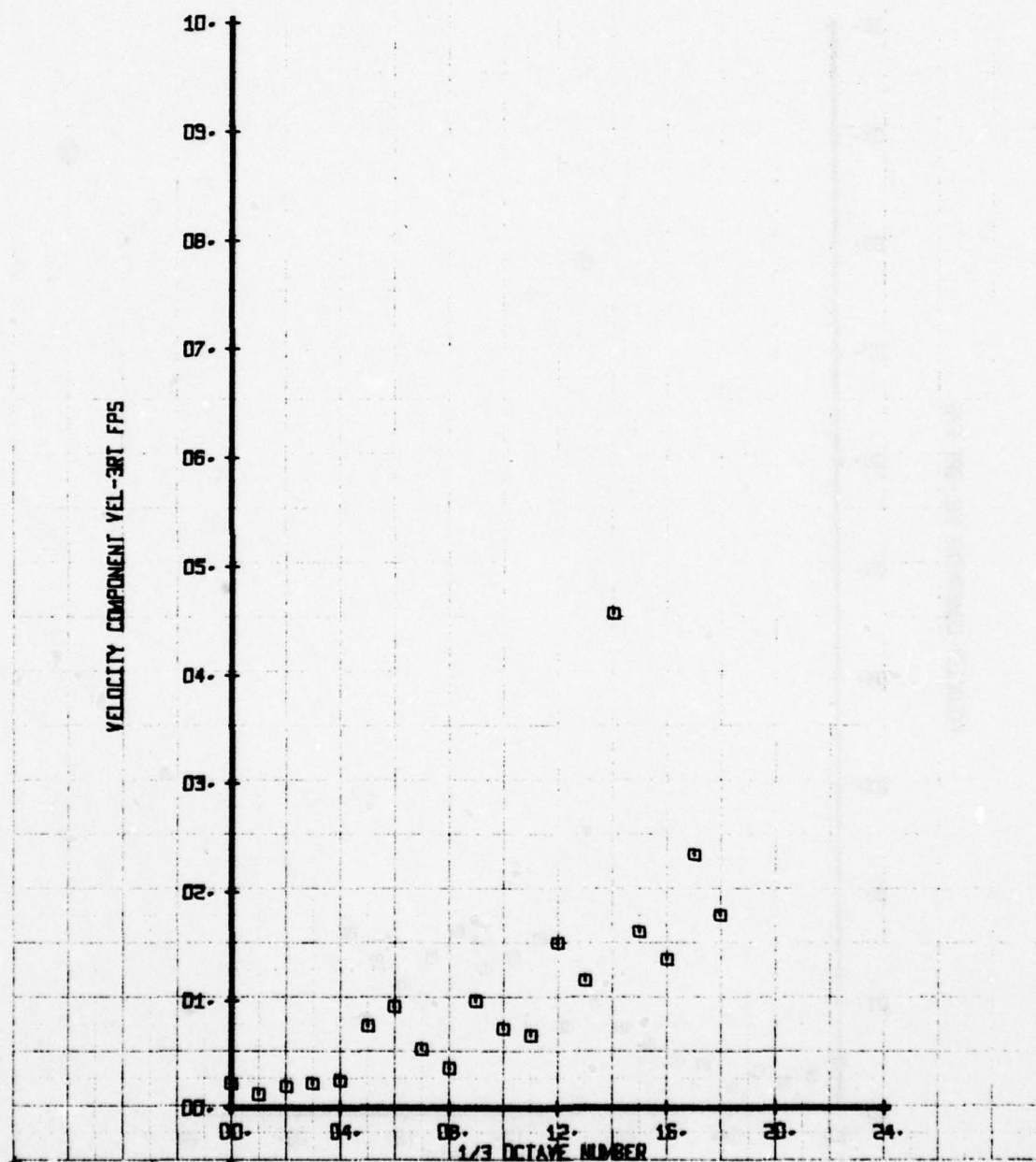
LEGEND  
 PARAMETER  
 VEL-3RT





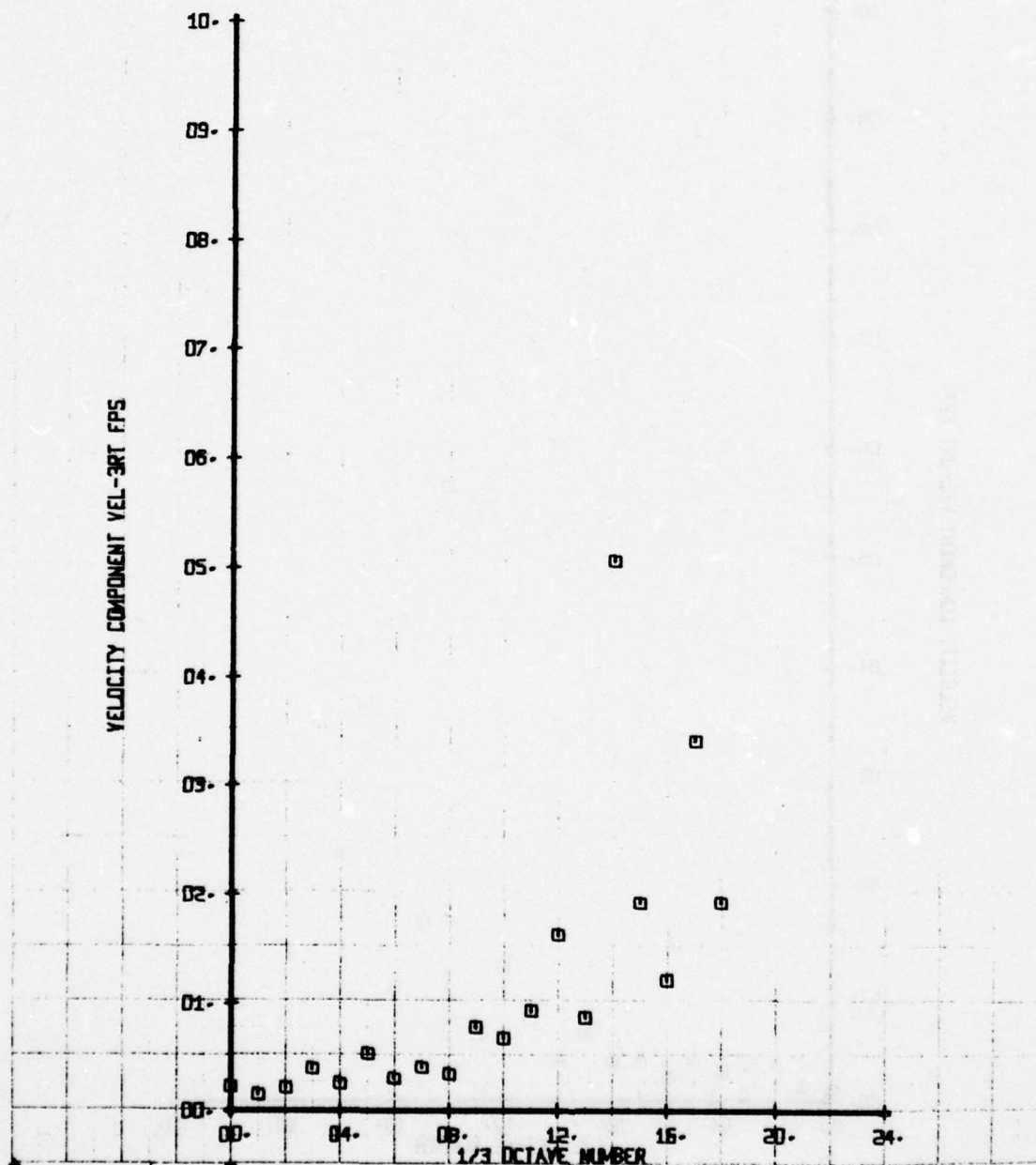
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBDY 160- 2-OGP BLOS  
RUN 168 TP 7

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 16D- 2-DGP BLOS  
 RUN 168 TP B

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



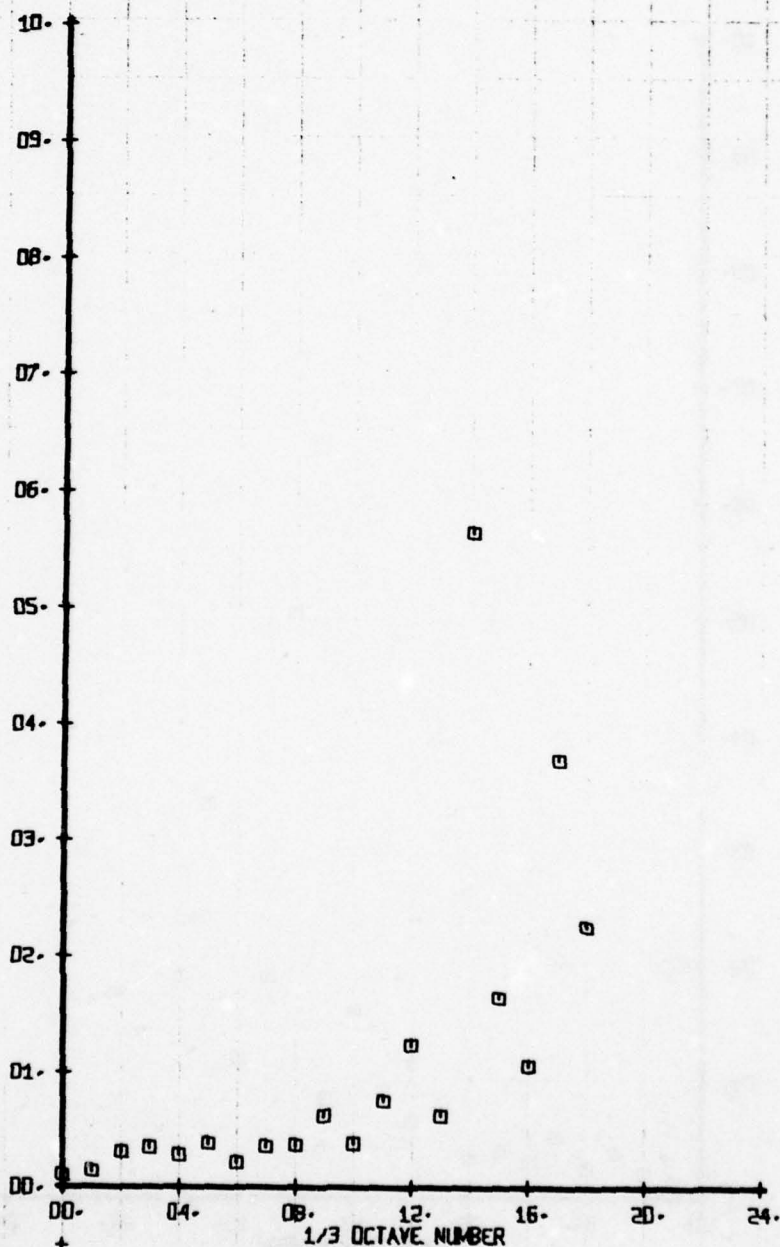
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O BODY 160- 2-DBP BLOS  
RUN 168 TP 9

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



1/3 OCTAVE NUMBER

162



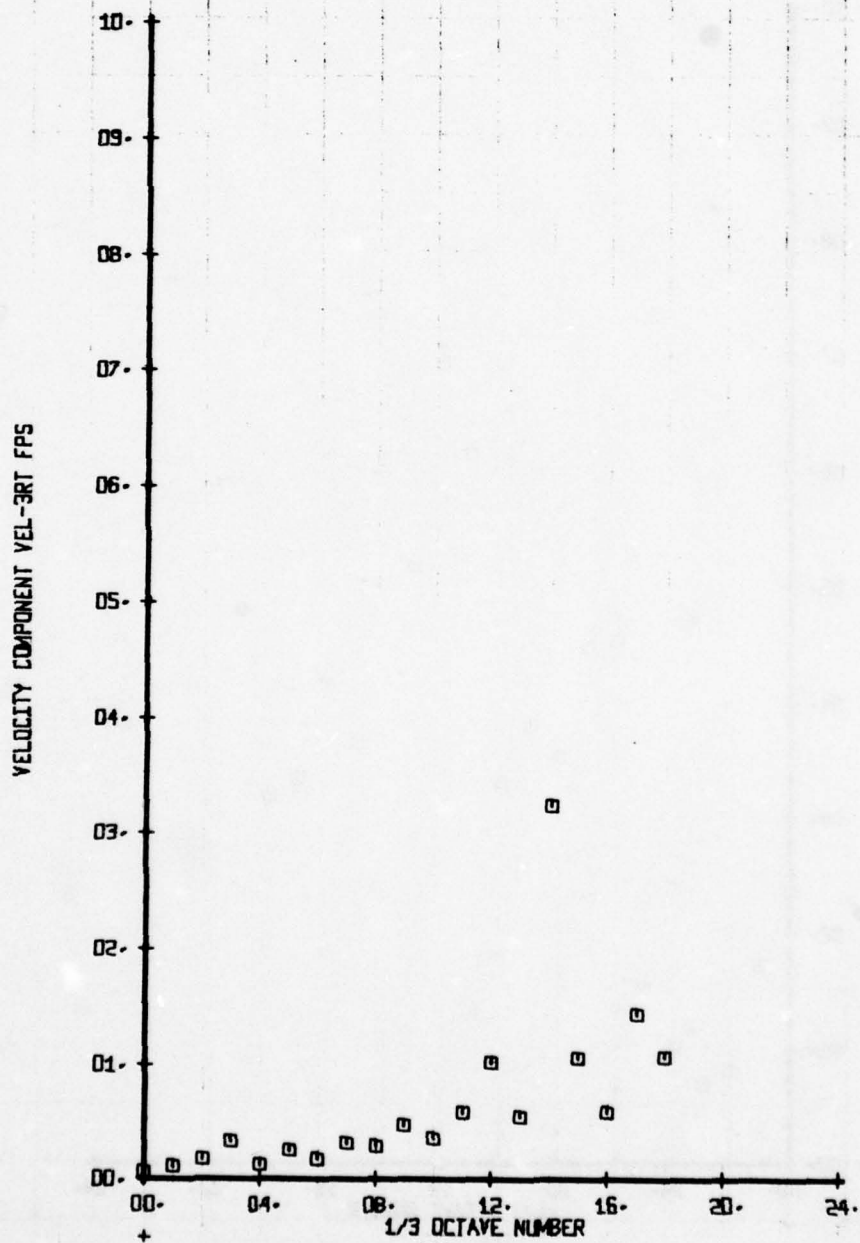
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O USSDY 160- 2-00P BLOS  
RUN 168 TP 10

SYM  
□

CH  
71

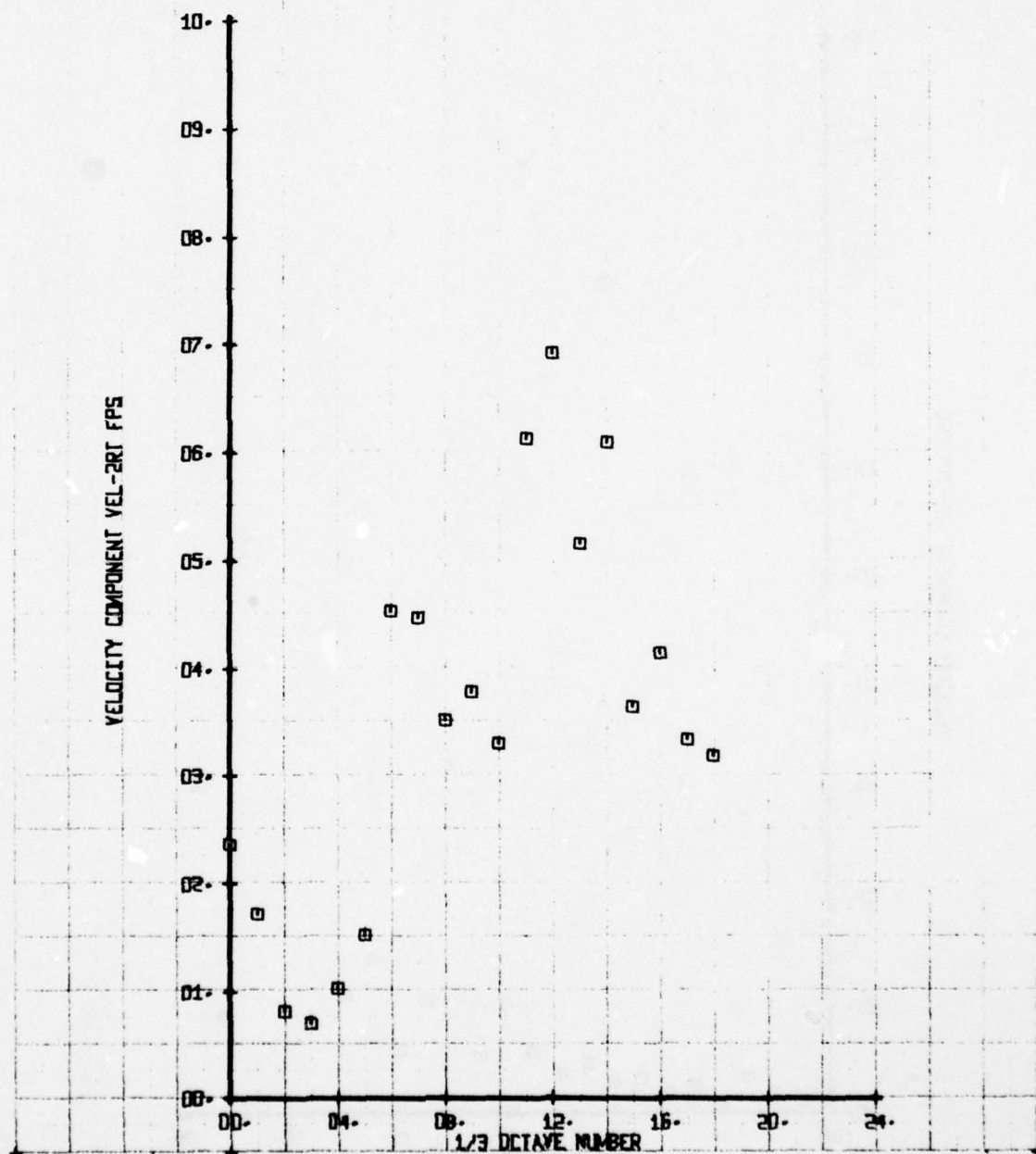
LEGEND

PARAMETER  
VEL-3RT



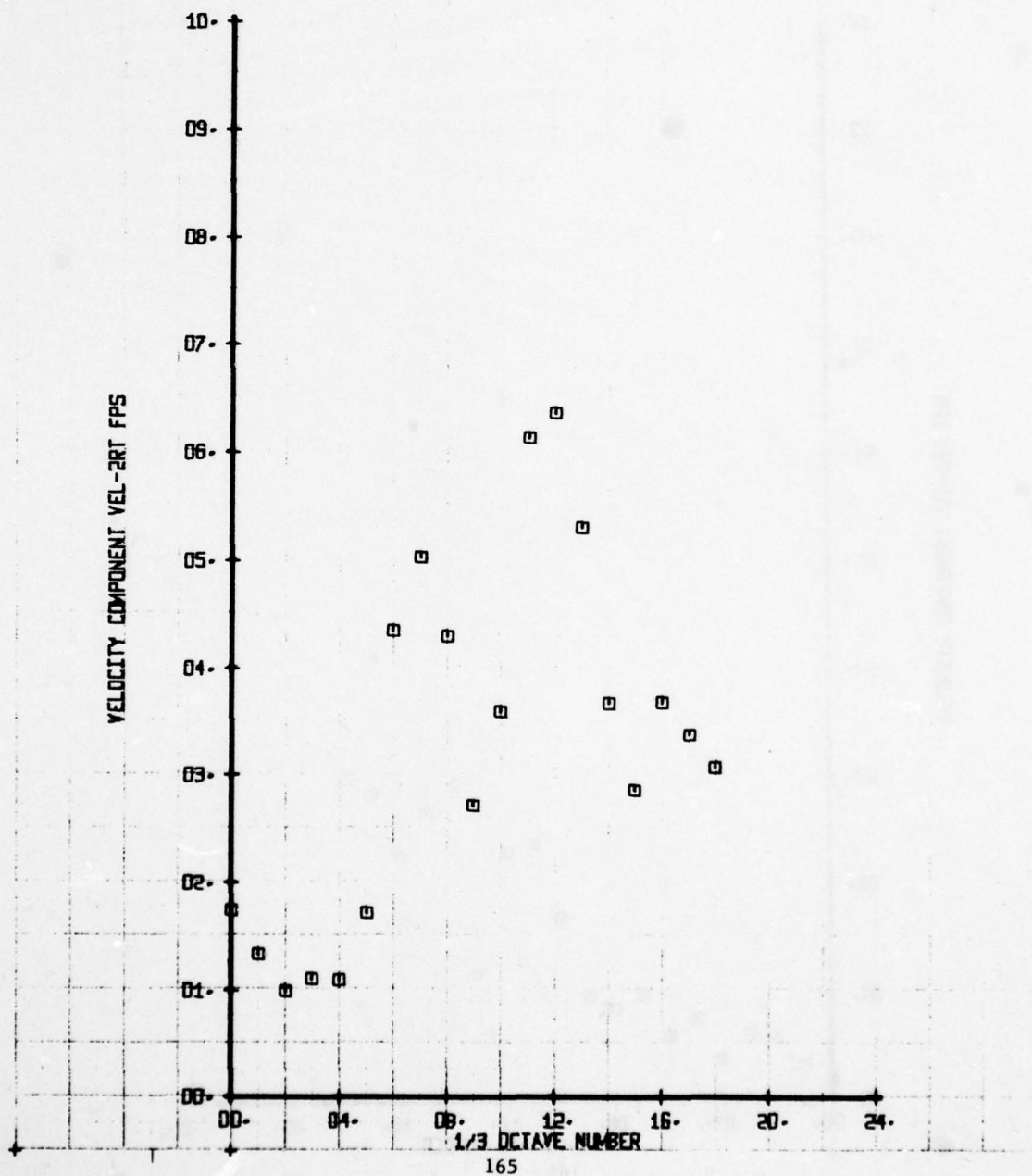
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O BODY 160- 2-OGP BLOS  
RUN 168 TP 4

LEGEND  
SYM CH PARAMETER  
□ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBDY 160- 2-OGP BLOS  
RUN 168 TP 5

LEGEND  
SYM CH PARAMETER  
□ 75 VEL-2RT



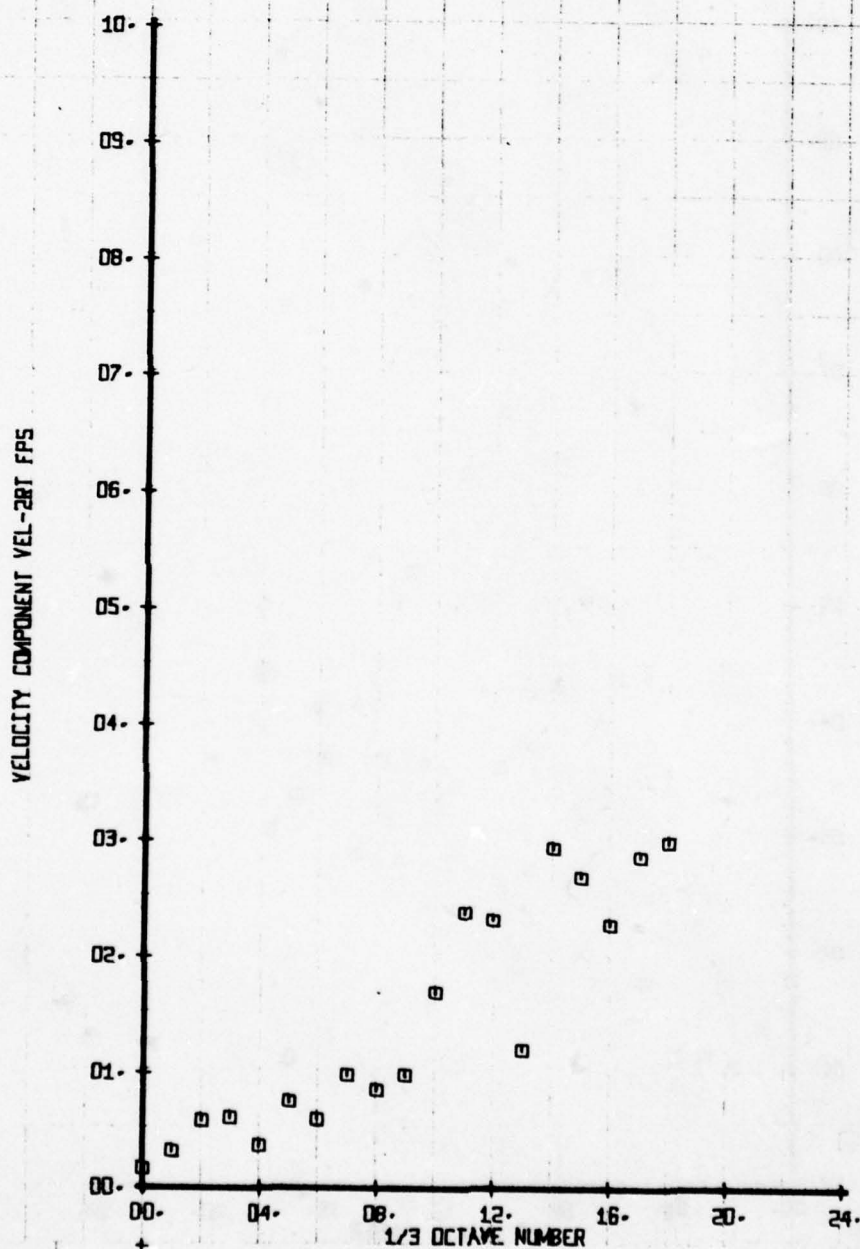


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O BODY 160 2-DBP BLOS  
 RUN 168 TP 6

SYM  
 0

CH  
 75

LEGEND  
 PARAMETER  
 VEL-2RT



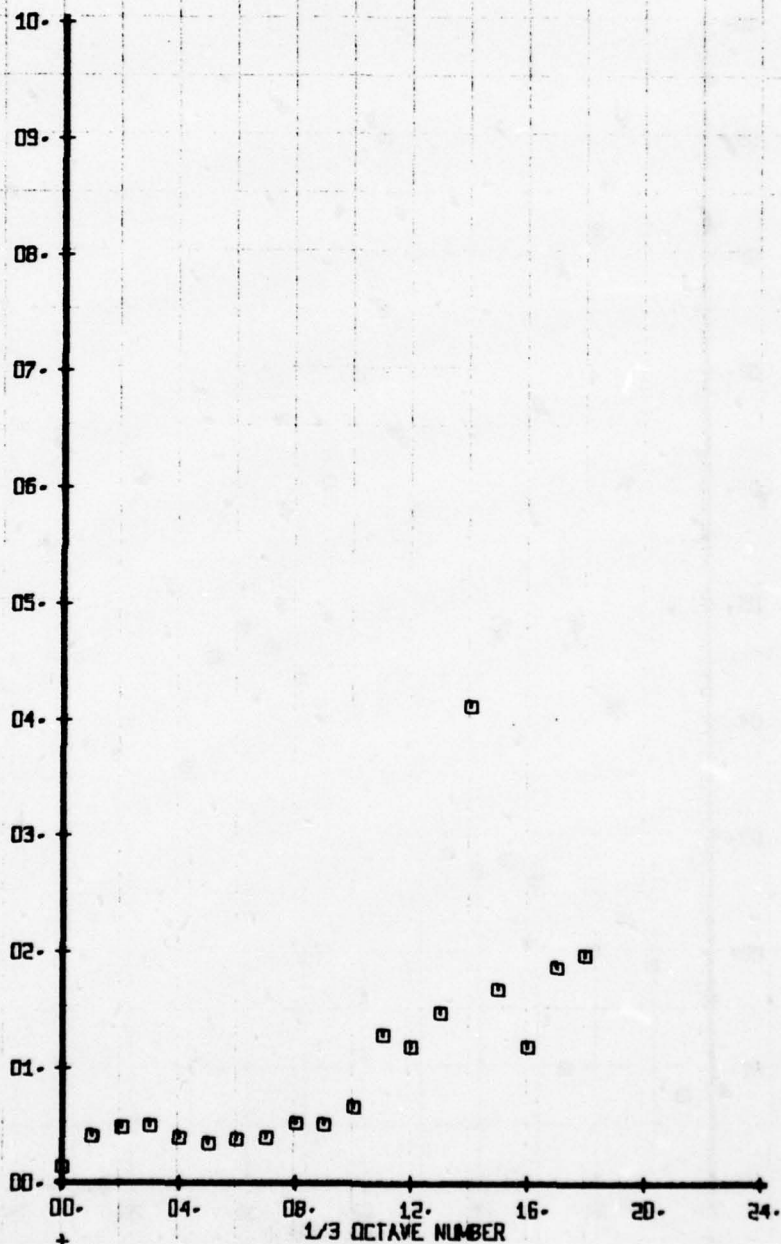
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UDDY 160 2-OSP BLOS  
RUN 168 TP 7

SYM  
0

EH  
75

LEGEND  
PARAMETER  
VEL-2RT

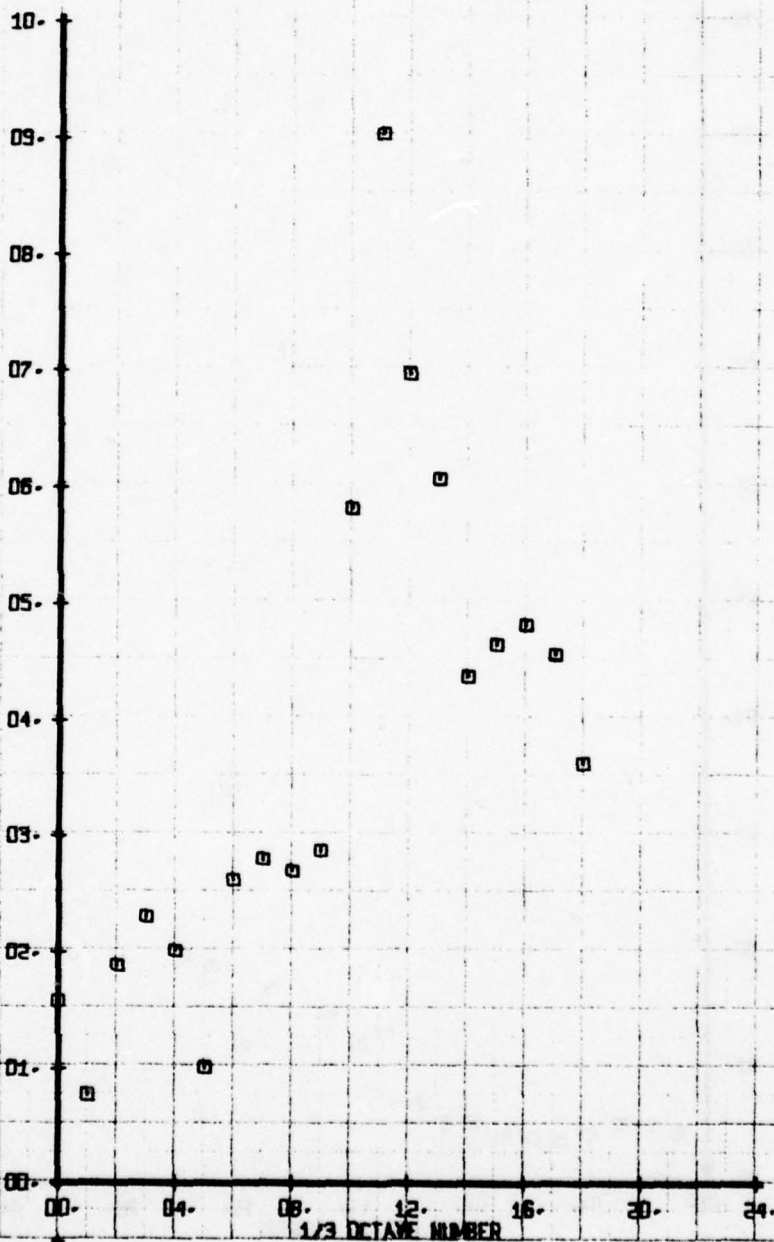
VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBODY 160- 2-DCP BLDS  
 RUN 168 TP 4

LEGEND  
 SYM CH PARAMETER  
 0 74 VEL-1RT

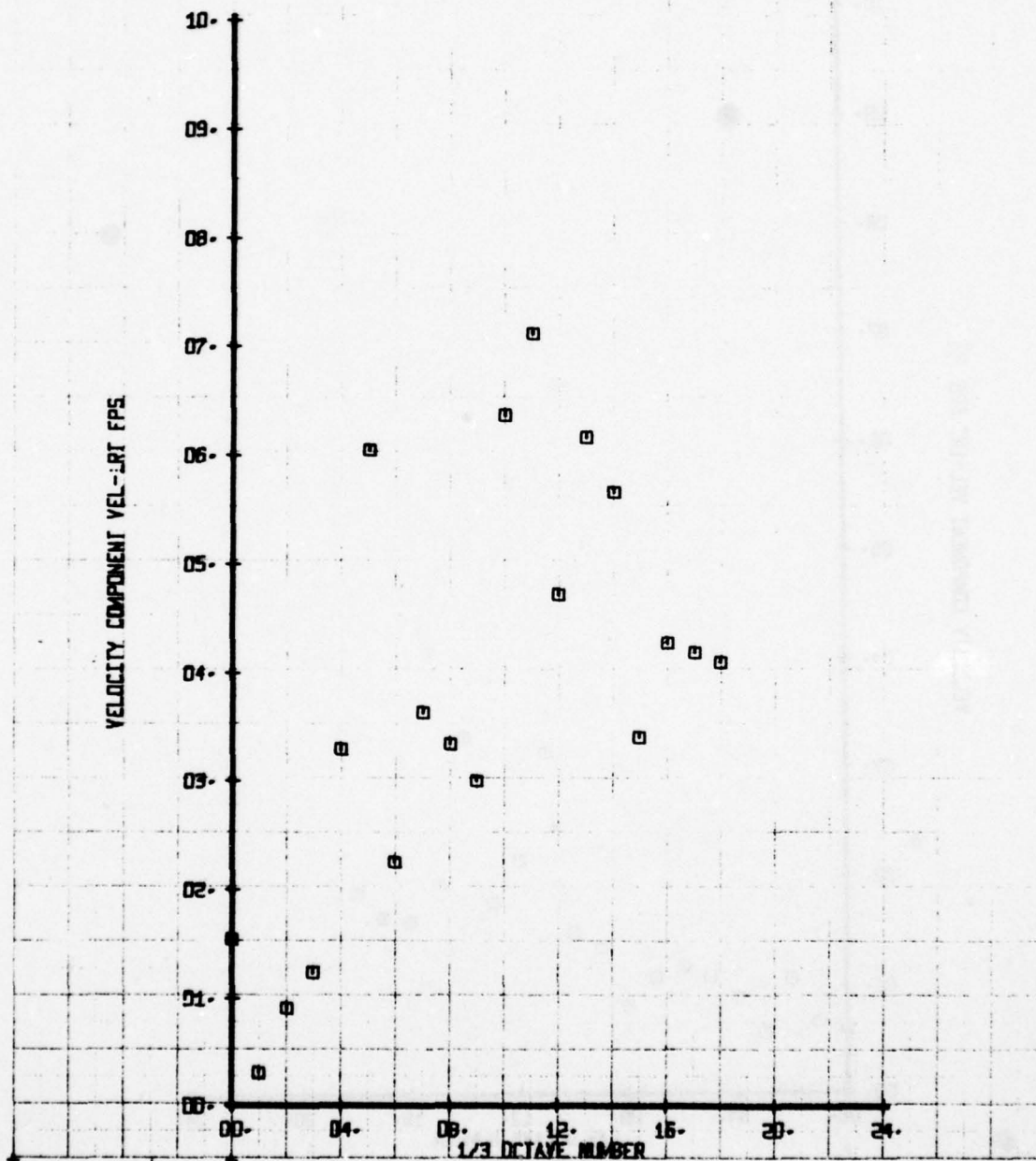
VELOCITY COMPONENT VEL-1RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/B UDDY 160- 2-00P BLOS  
RUN 168 TP 5

LEGEND  
SYM CH PARAMETER  
□ 74 VEL-1RT



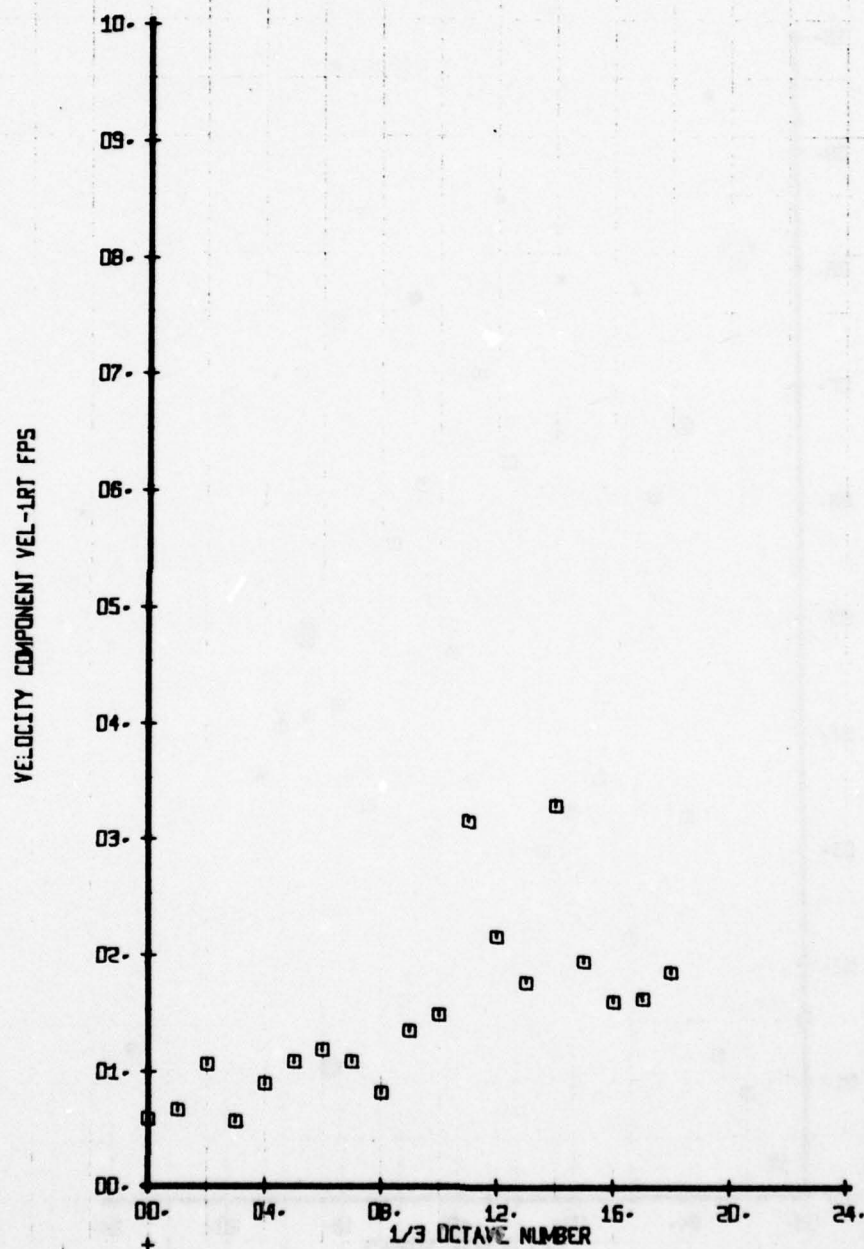
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160- 2-DCP BLOS  
 RUN 168 TP 6

SYM  
 □

LEGEND

CH  
 74

PARAMETER  
 VEL-1RT



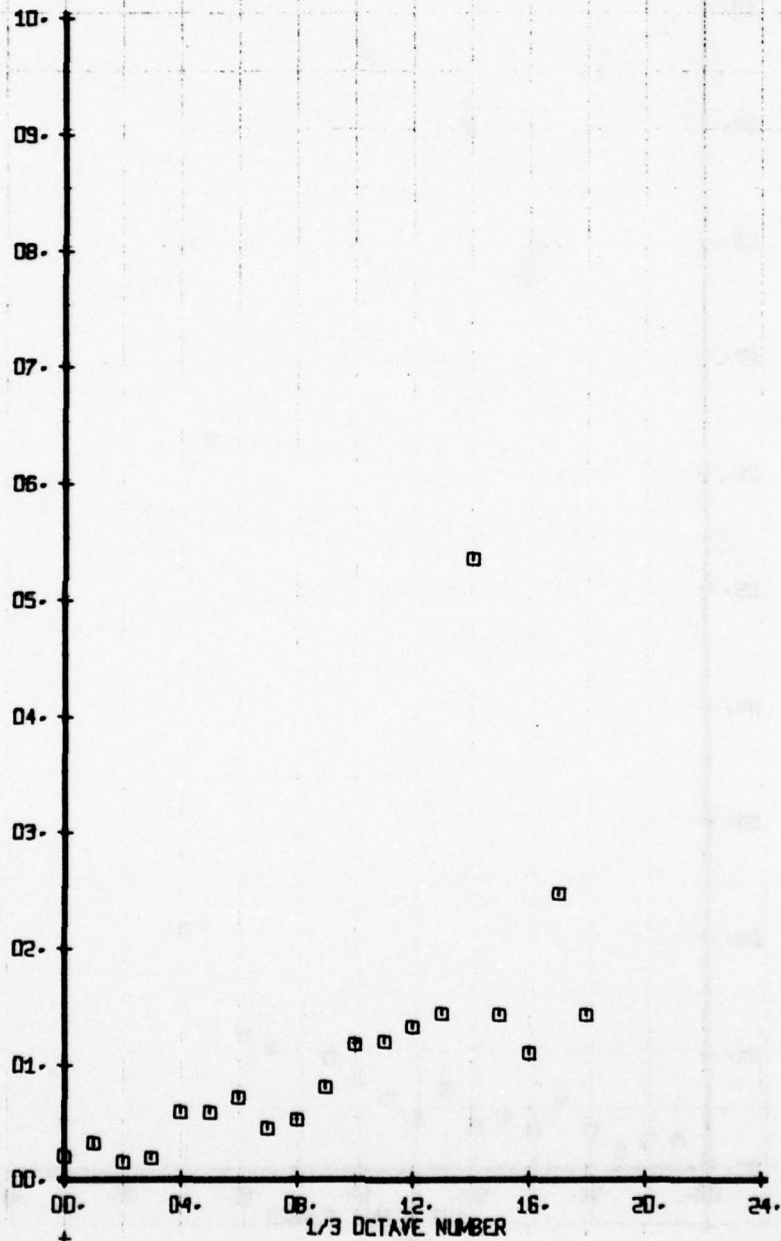
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O BODY 160- 2-00P BLOS  
RUN 168 TP 7

SYM  
0

CH  
74

LEGEND  
PARAMETER  
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



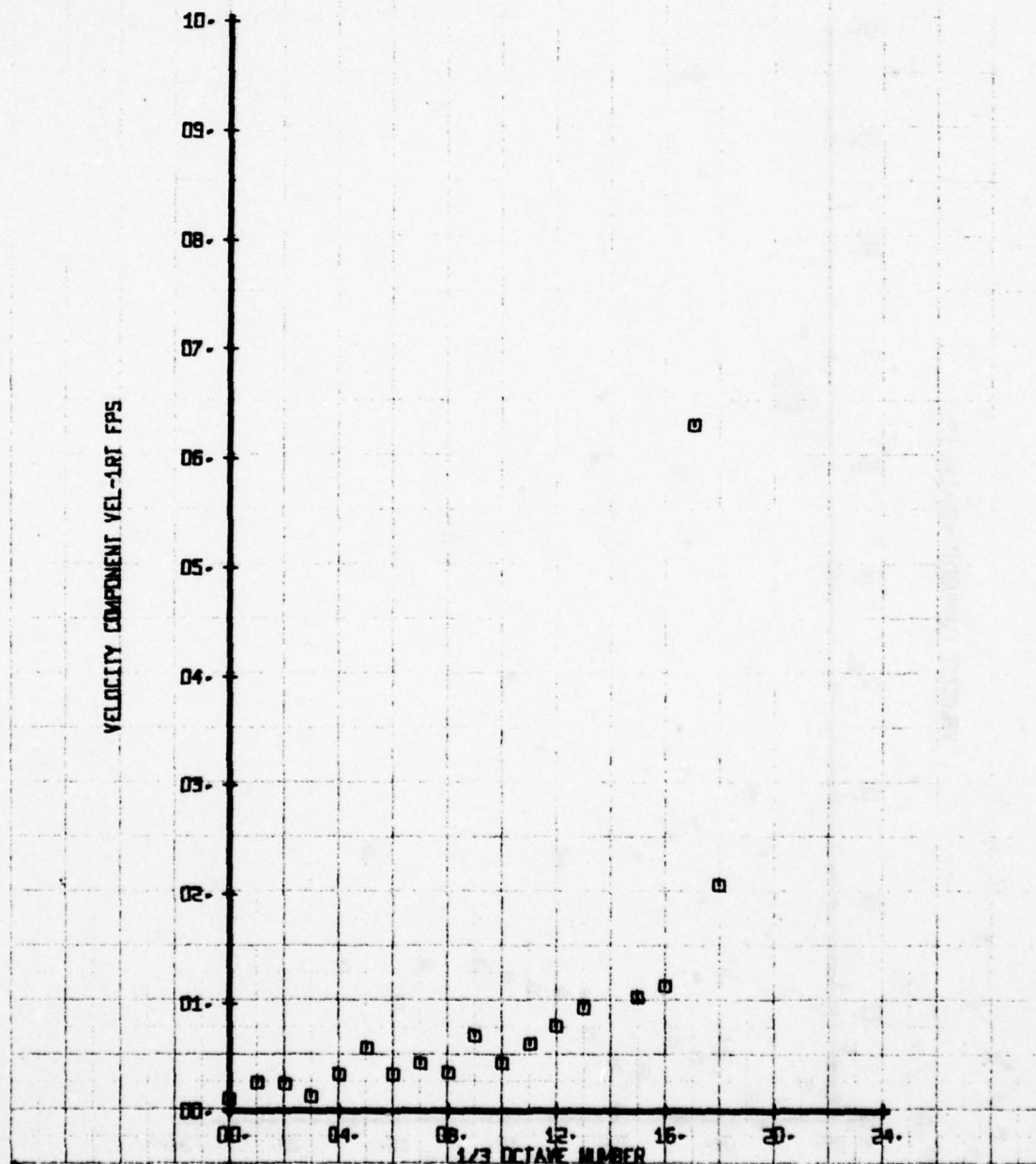


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160+ 2-OGP BLOS  
 RUN 168 TP 8

SYM  
 0

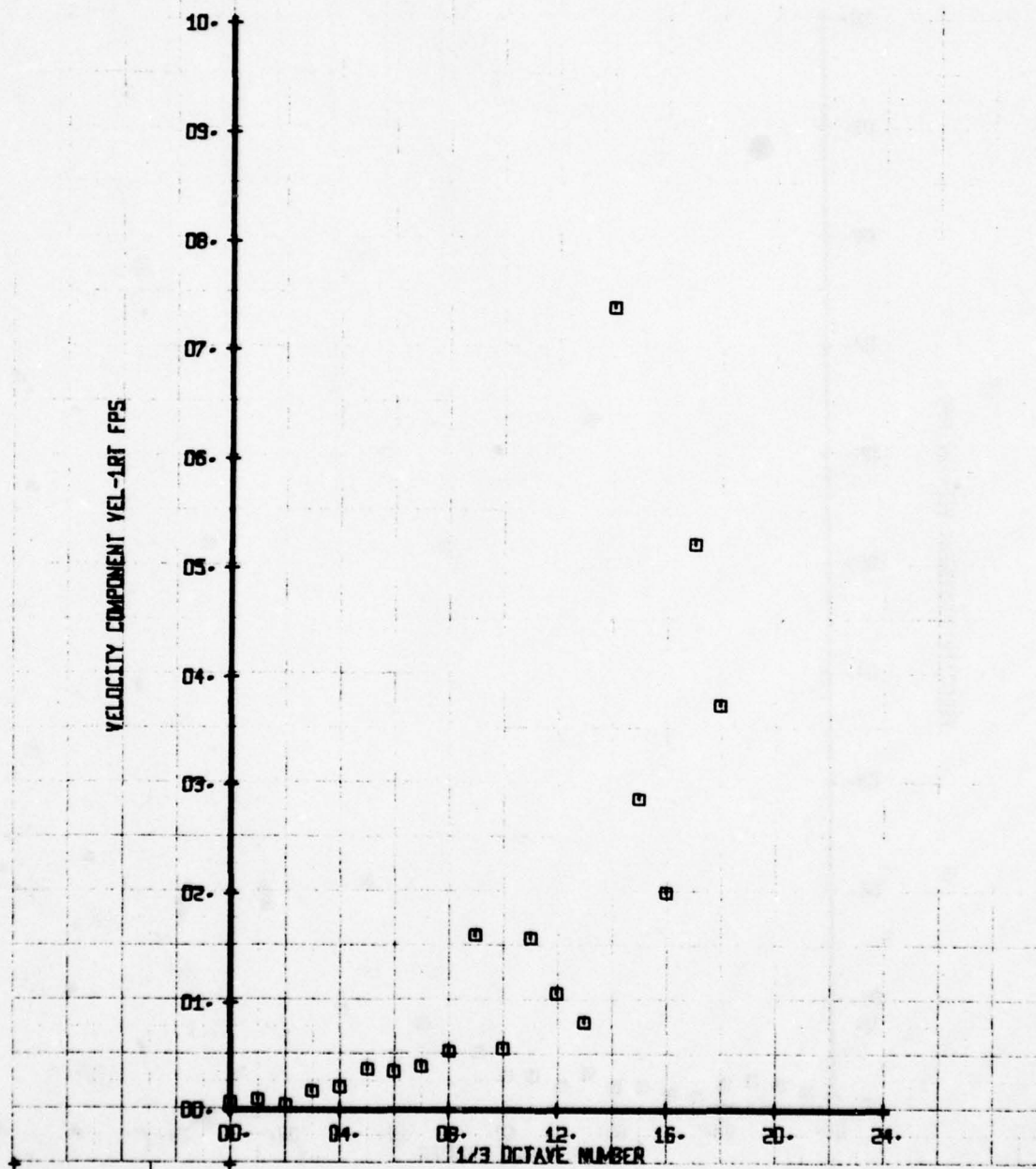
LEGEND  
 CH 74  
 PARAMETER  
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160- 2-OGP BLOS  
 RUN 168 TP 9

LEGEND  
 CH PARAMETER  
 74 VEL-1RT



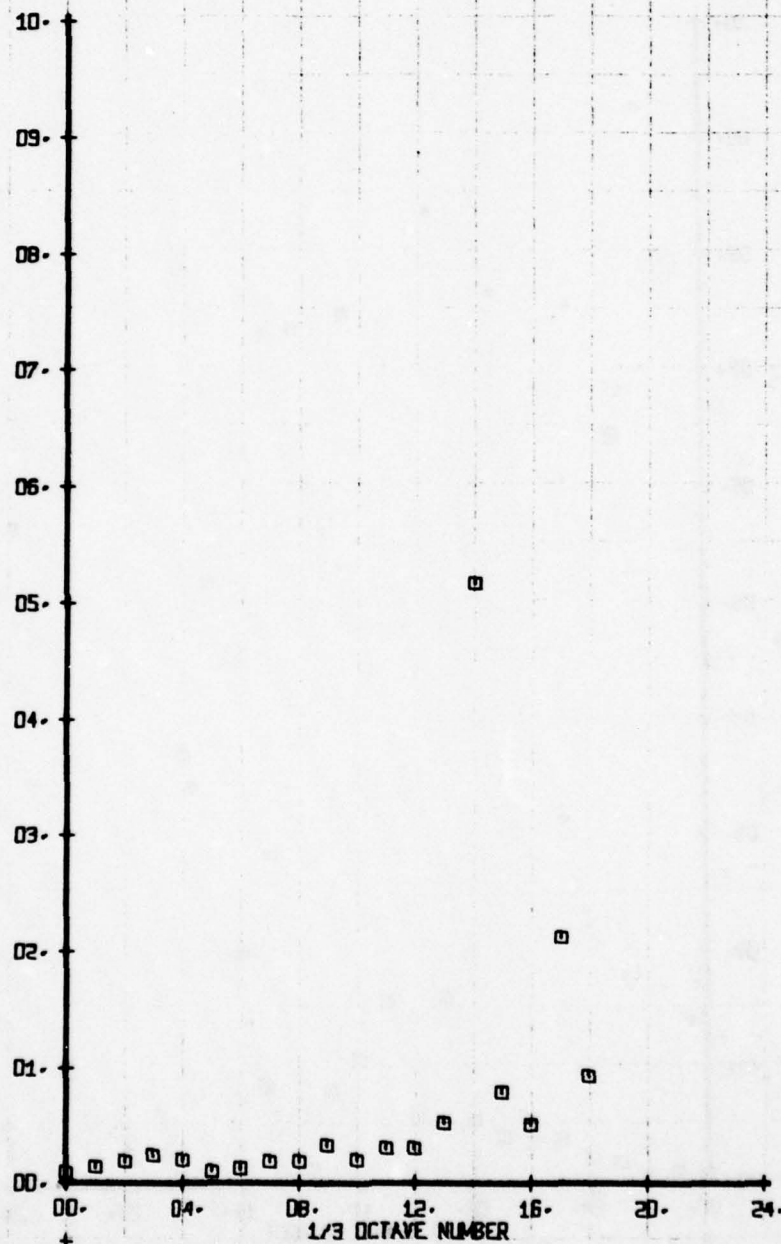
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBDY 160- 2-00P BLOS  
RUN 168 TP 10

SYM  
□

CH  
74

LEGEND  
PARAMETER  
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS





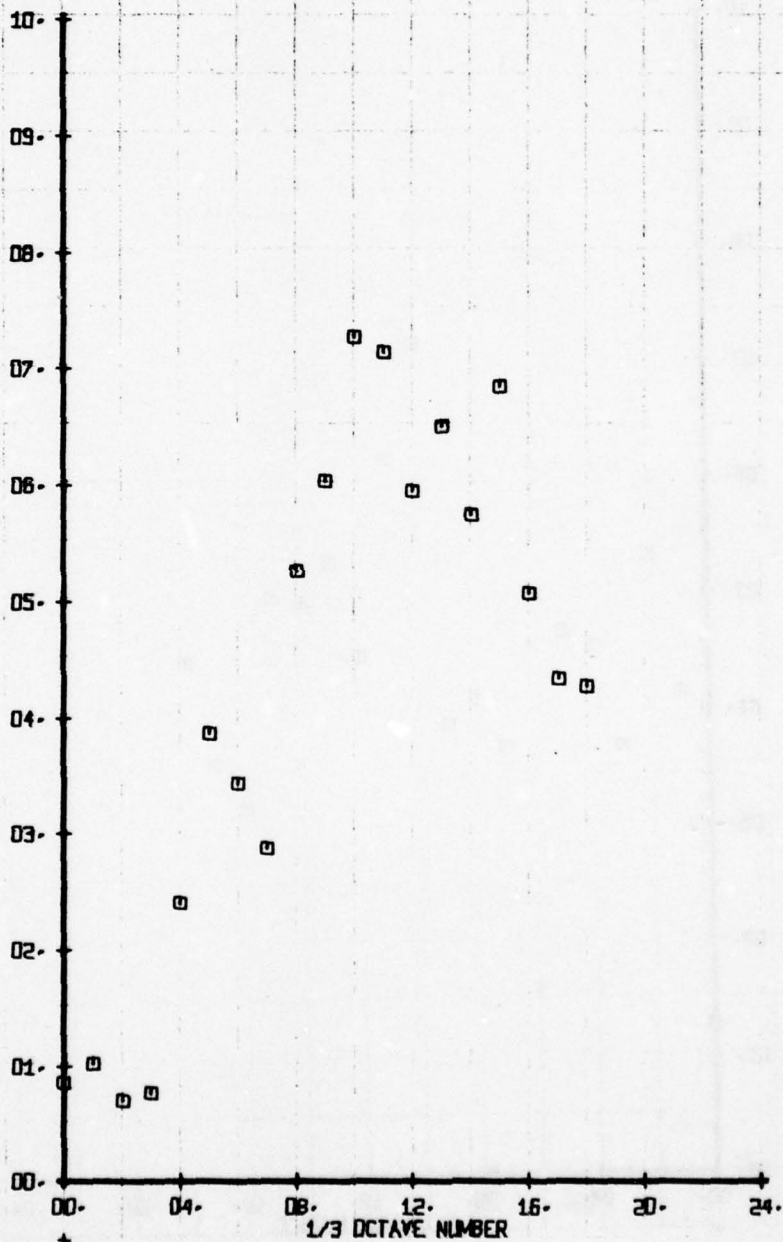
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN EAP W/O UDDY 160-2-09P BLOS  
 RUN 188 TP 4

SYM  
 □

CH  
 73

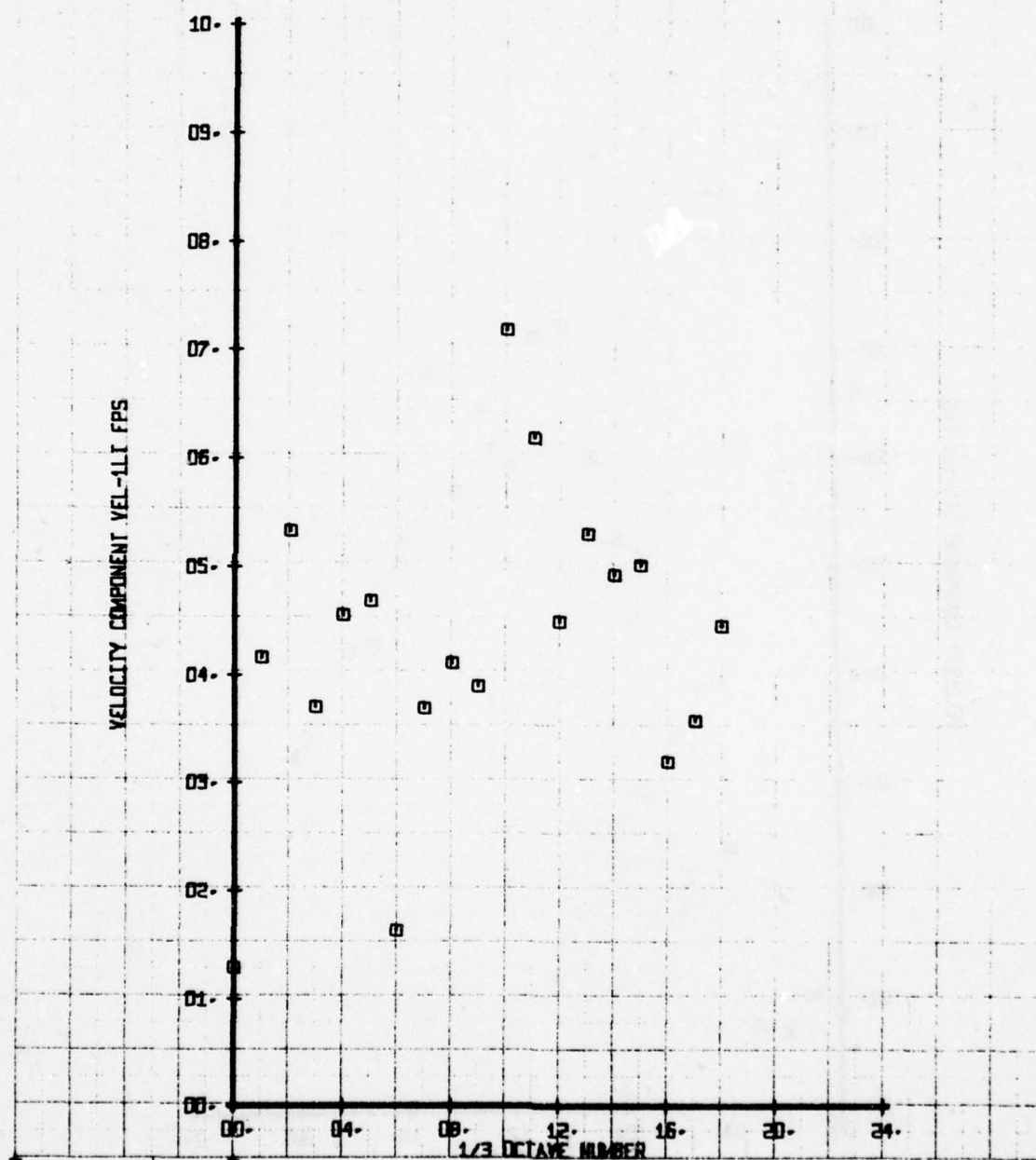
LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



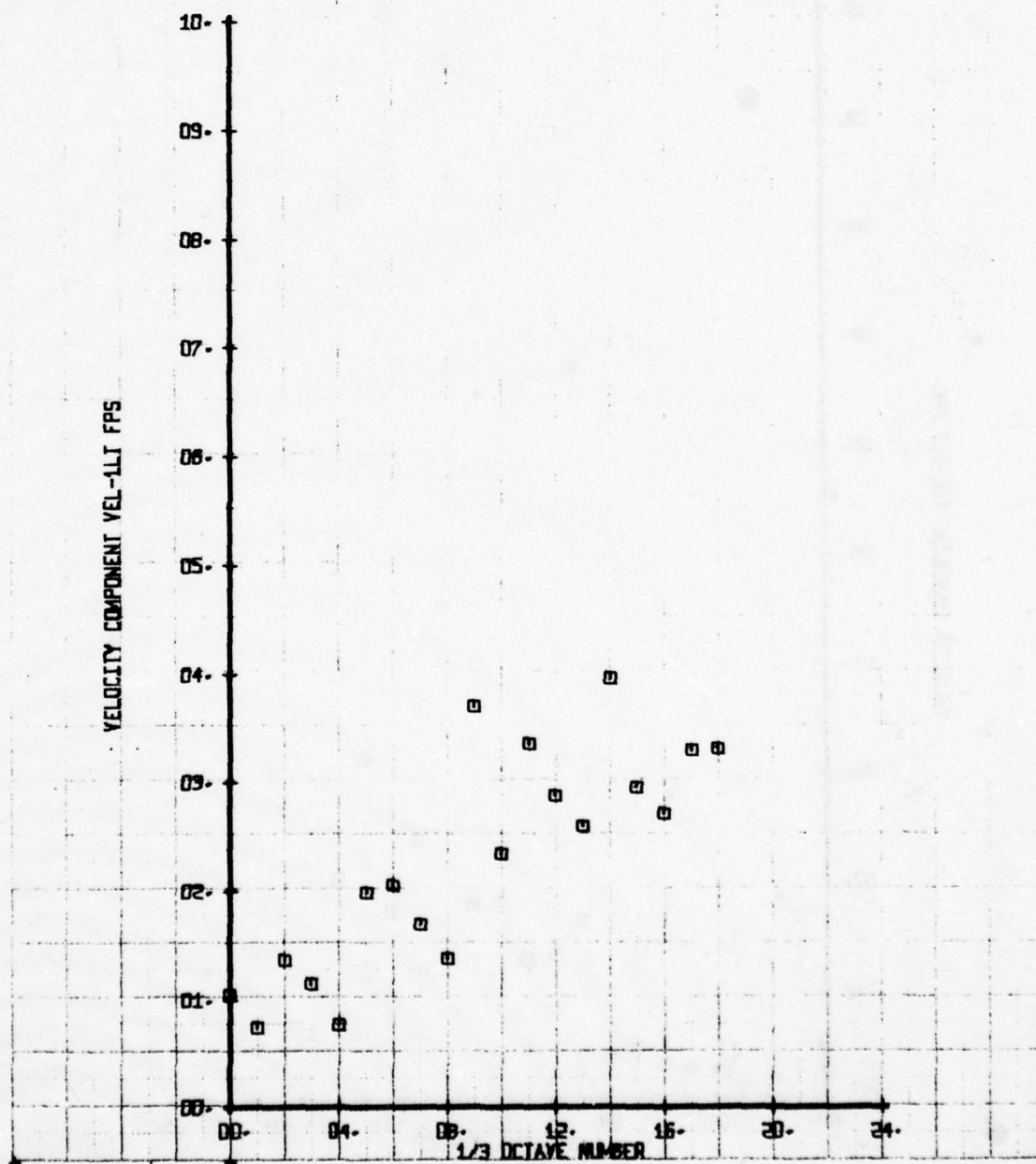
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBODY 160- 2-DGP BLOS  
RUN 168 TP 5

LEGEND  
SYM CH PARAMETER  
□ 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160- 2-DBP BLOS  
 RUN 168 TP 6

LEGEND  
 SYM CH PARAMETER  
 □ 73 VEL-1LT





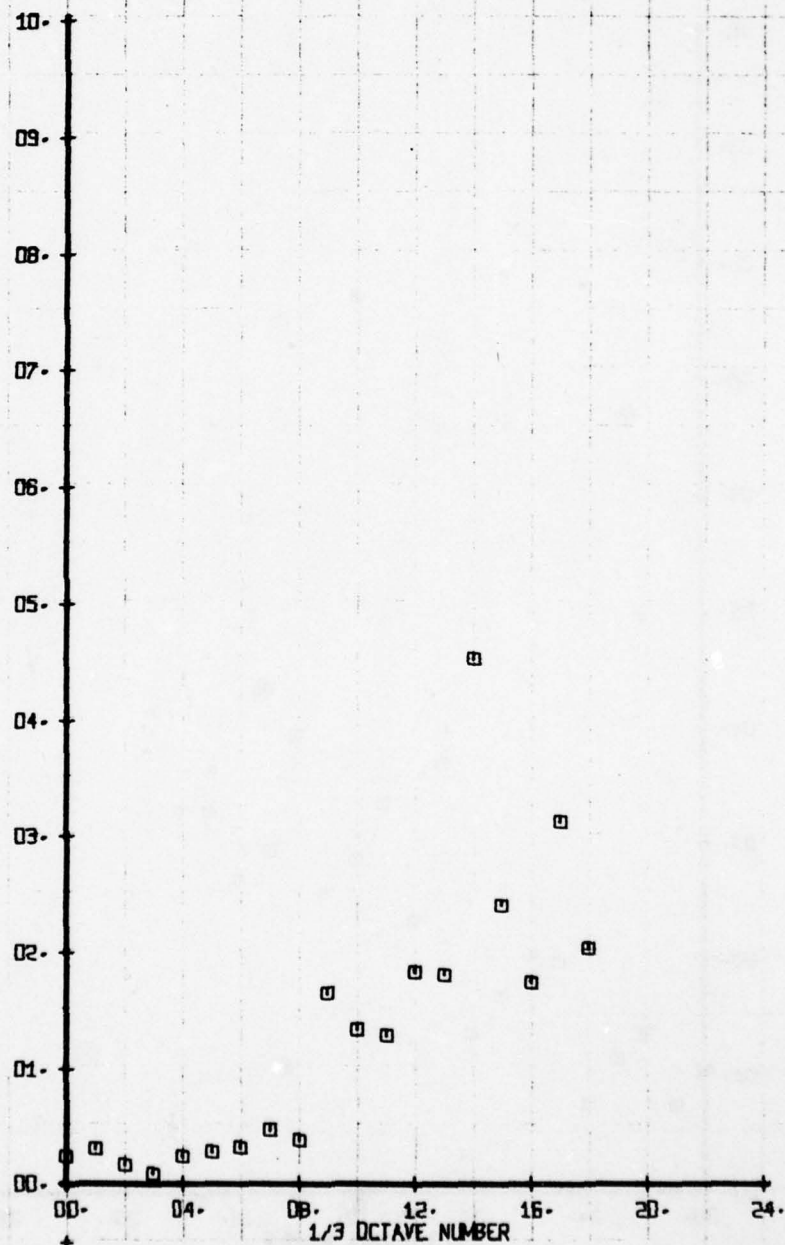
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160-2-00P BLOS  
 RUN 168 TP 7

SYM  
 □

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS

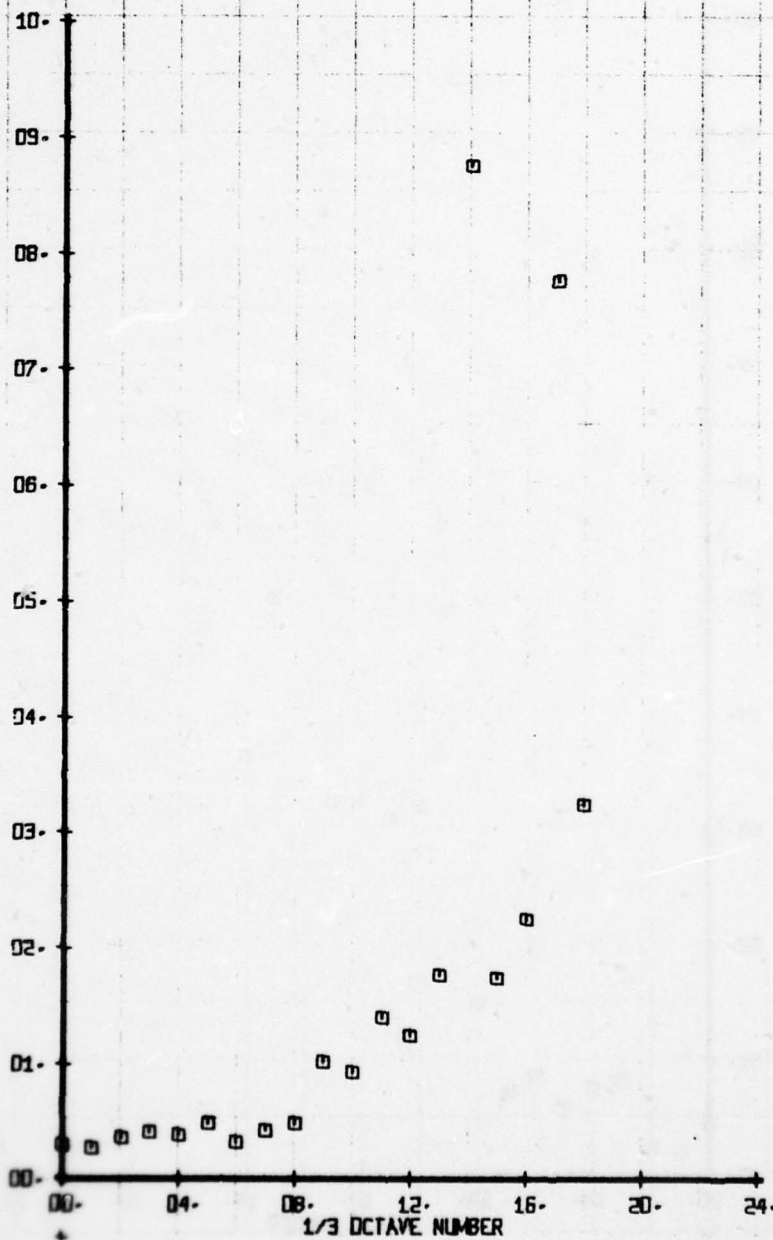


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160 2-DBP BLOS  
 RUN 168 TP B

SYM  
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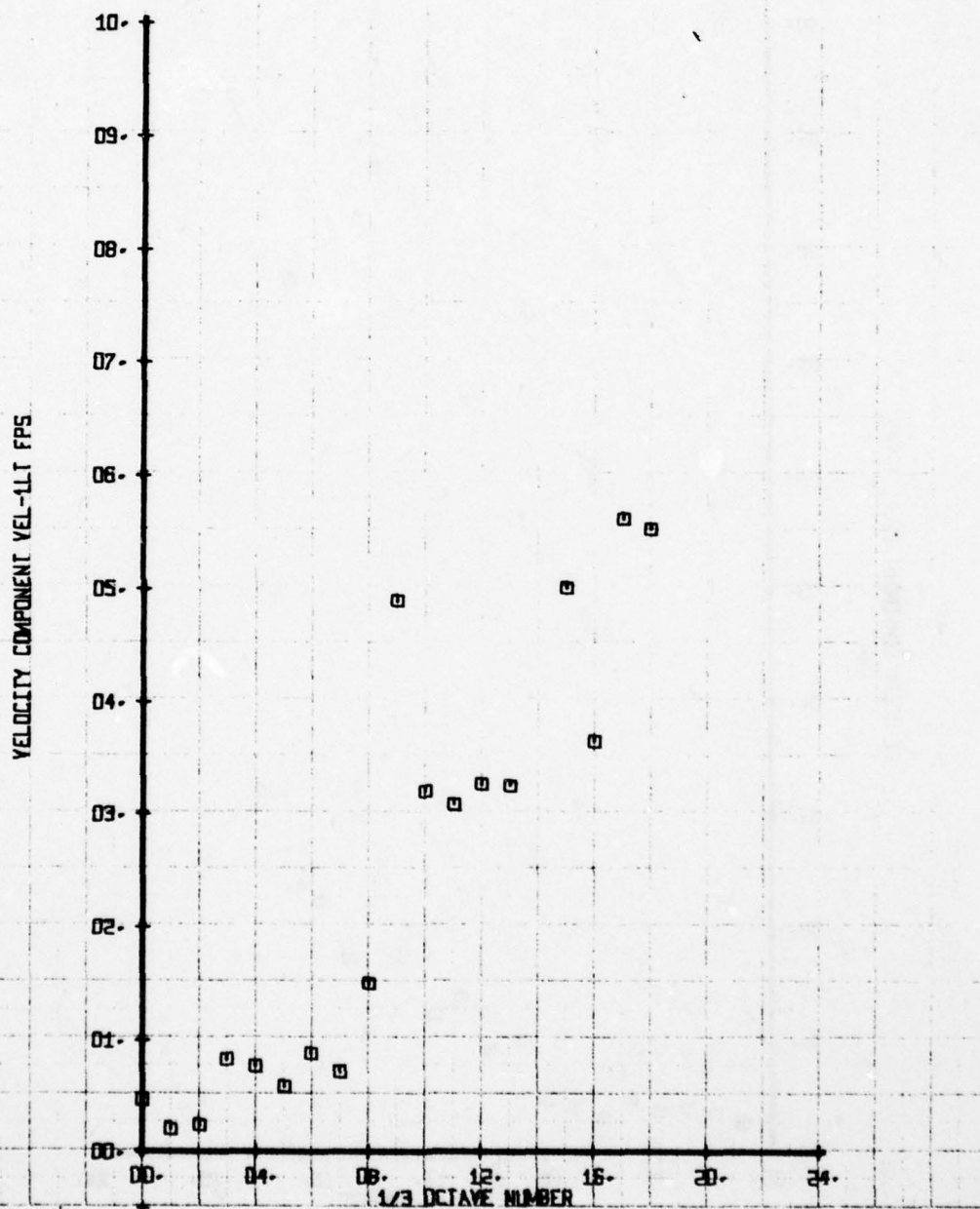
LEGEND  
 CH 73  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UDDY 160- 2-OGP BLOS  
RUN 168 TP 9

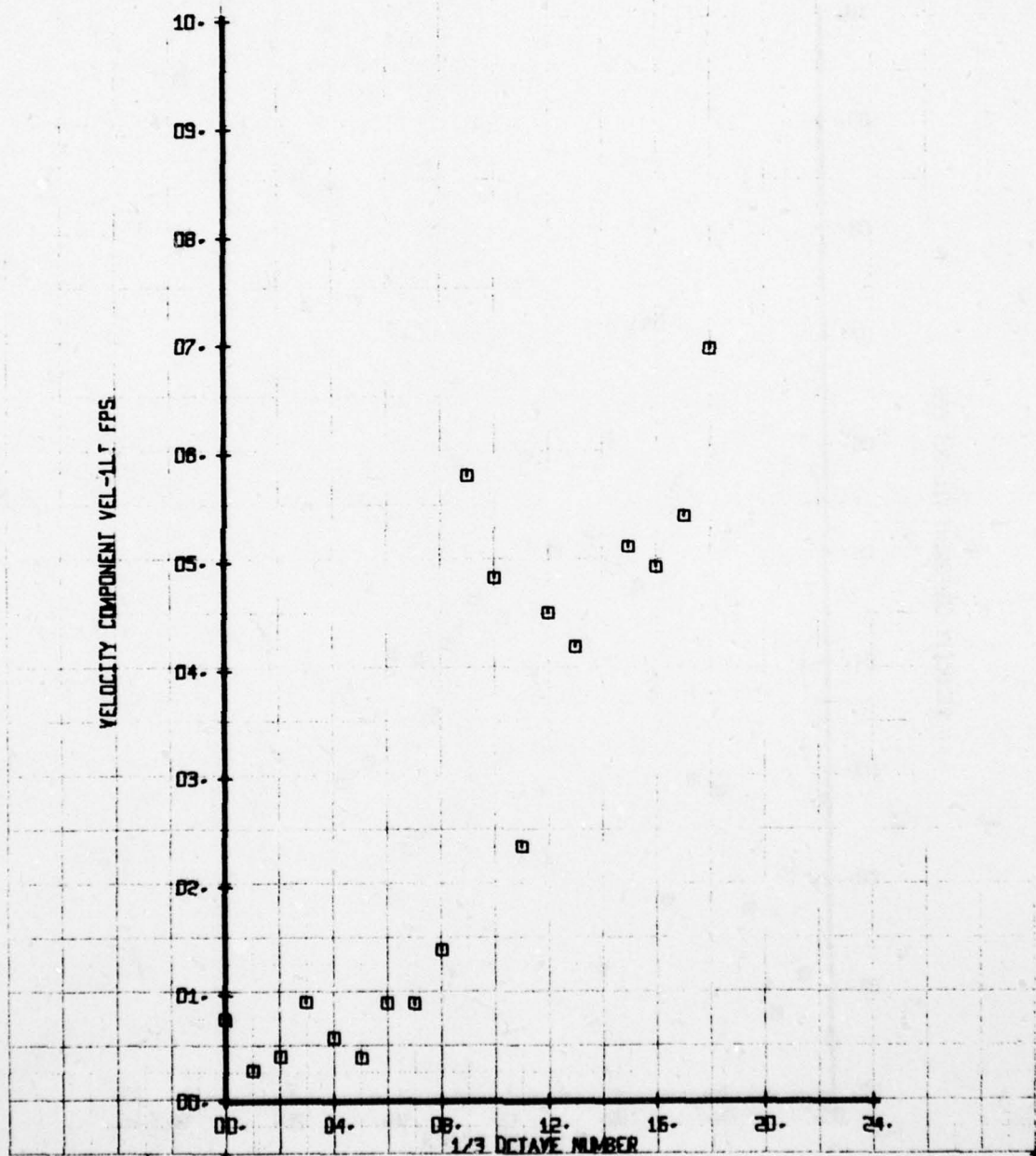
LEGEND  
SYM CH PARAMETER  
□ 73 VEL-1LT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160- 2-DGP BLOS  
 RUN 168 TP 10

LEGEND  
 CH PARAMETER  
 73 VEL-1LT

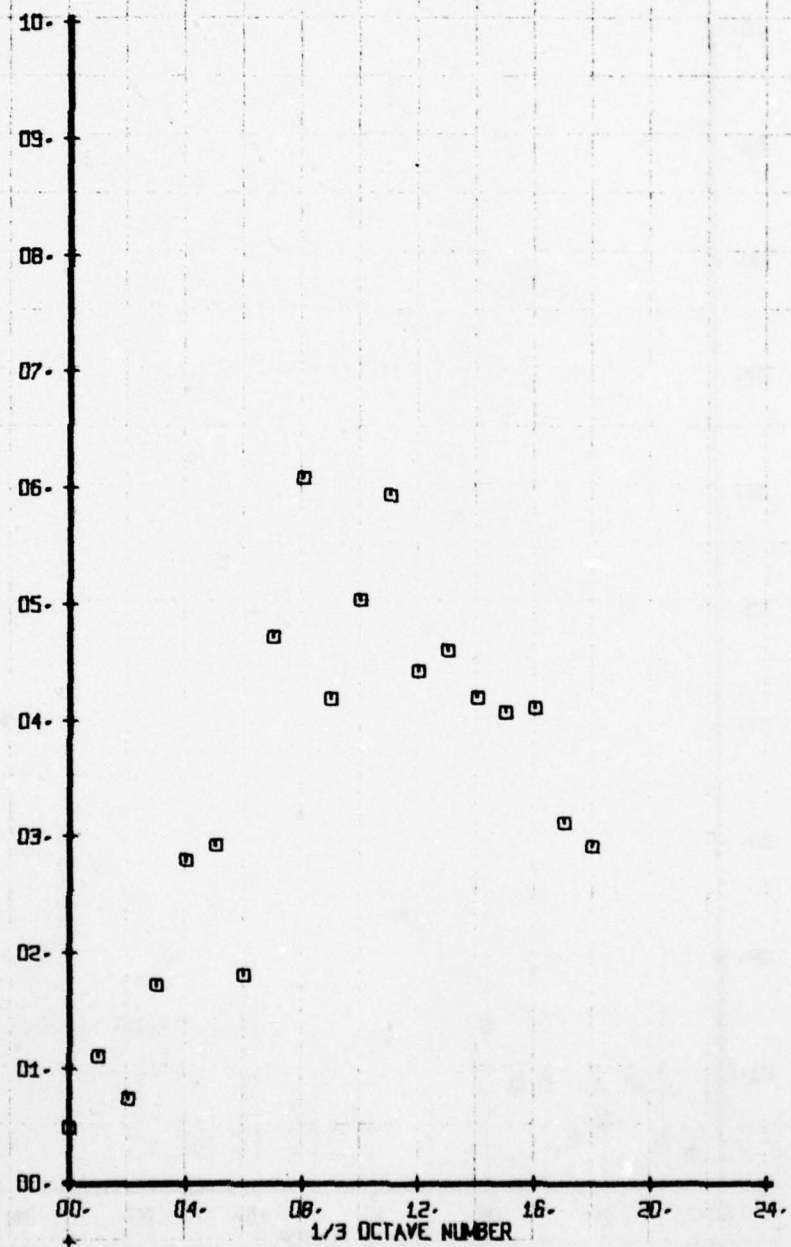


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O BODY 160 2-DEP BLOS  
RUN 168 TP 4

SYM  
□

LEGEND  
CH 72  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

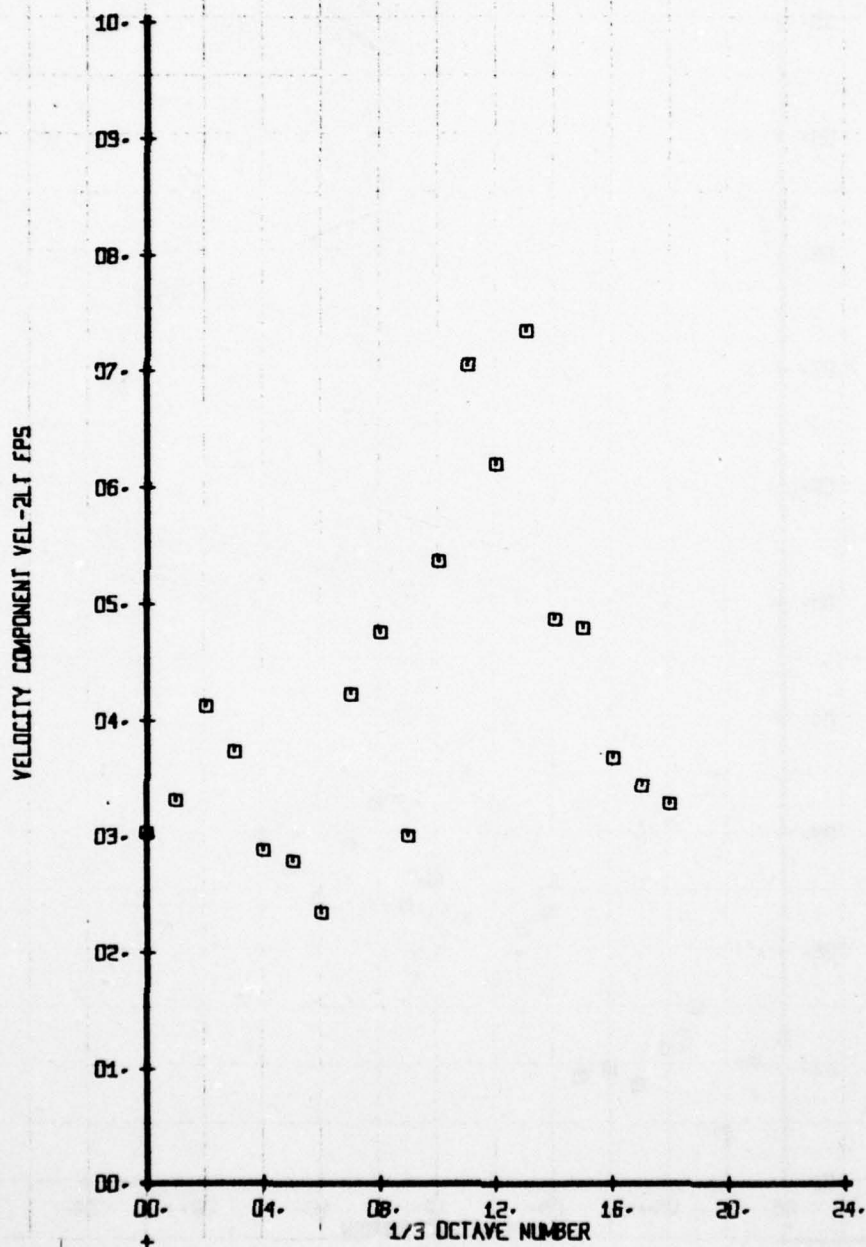


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OPEN CAP W/O UDDY 160 2-00P BLOS  
RUN 188 TP 5

SYM  
□

CH  
72

LEGEND  
PARAMETER  
VEL-2LT

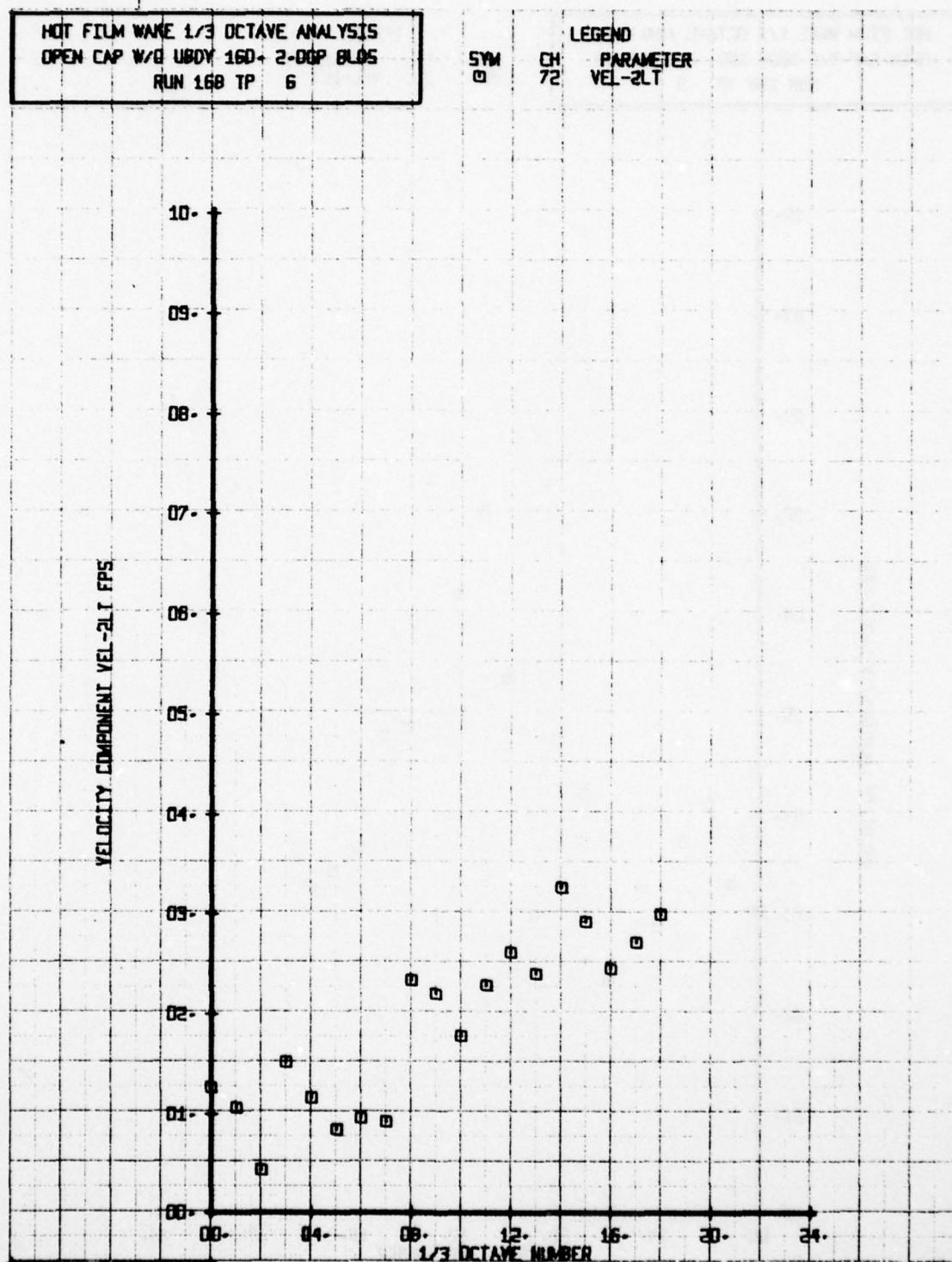




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O BODY 160- 2-00P BLOS  
RUN 168 TP 6

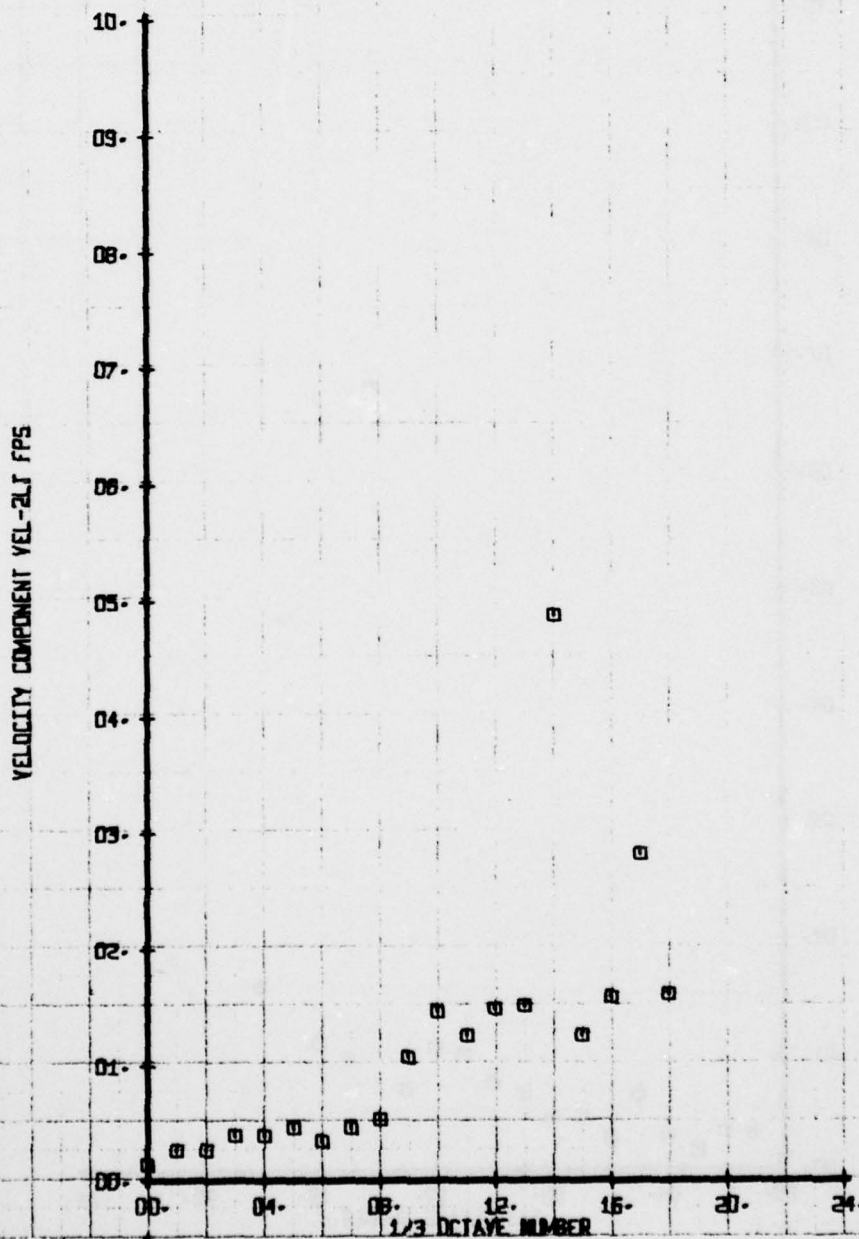
SYM  
□

LEGEND  
CH: 72  
PARAMETER  
VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/B UDDY 160- 2-00P BLOS  
RUN 168 TP 7

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT



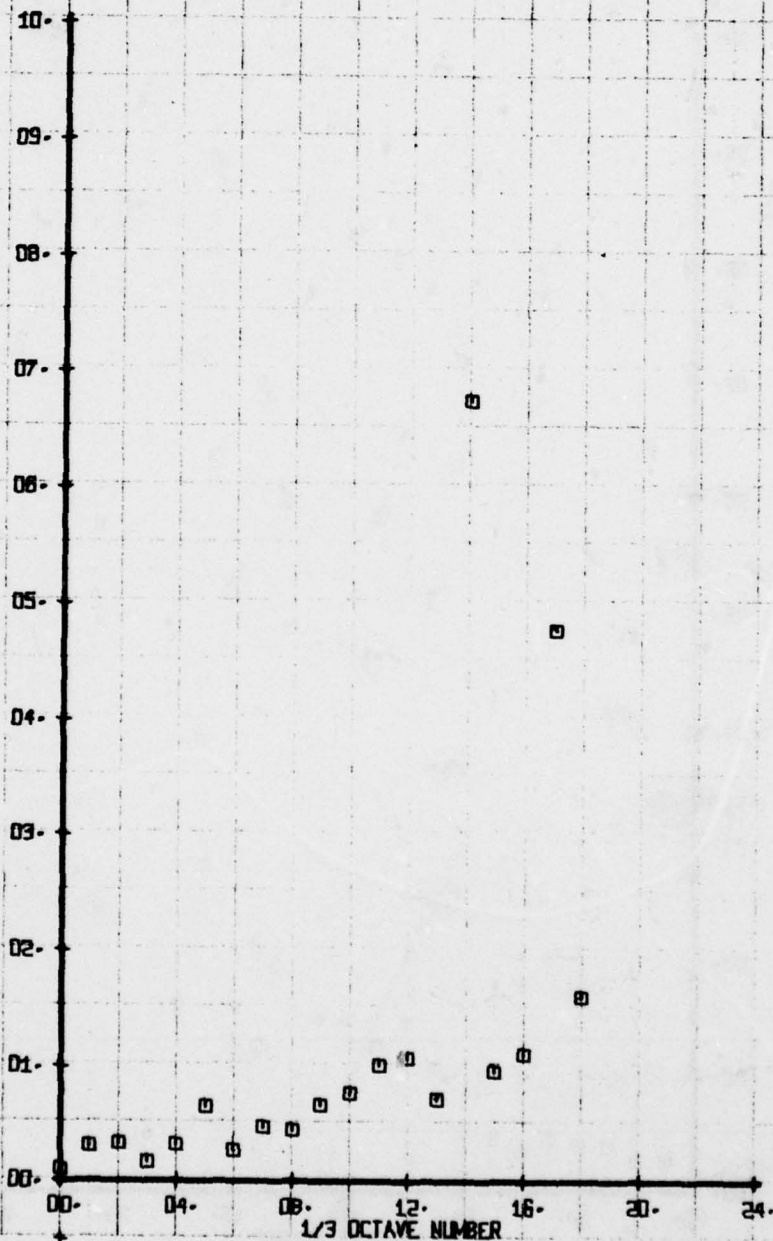
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UDDY-160 2-00P BLOS  
 RUN 168 TP 8

SYM  
 0

EH  
 72

LEGEND  
 PARAMETER  
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



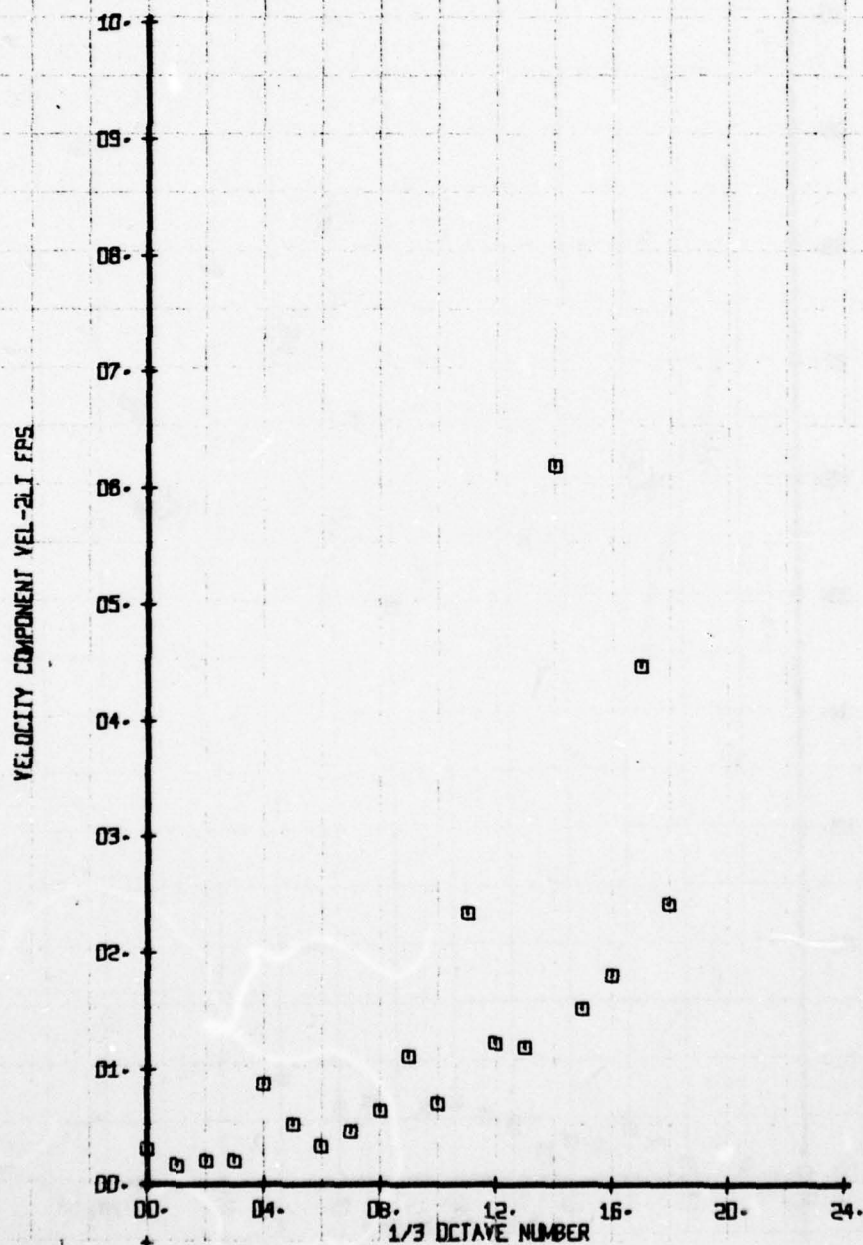


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160 2-00P BLOS  
 RUN 168 TP 9

SYM  
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CH  
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LEGEND  
 PARAMETER  
 VEL-2LT



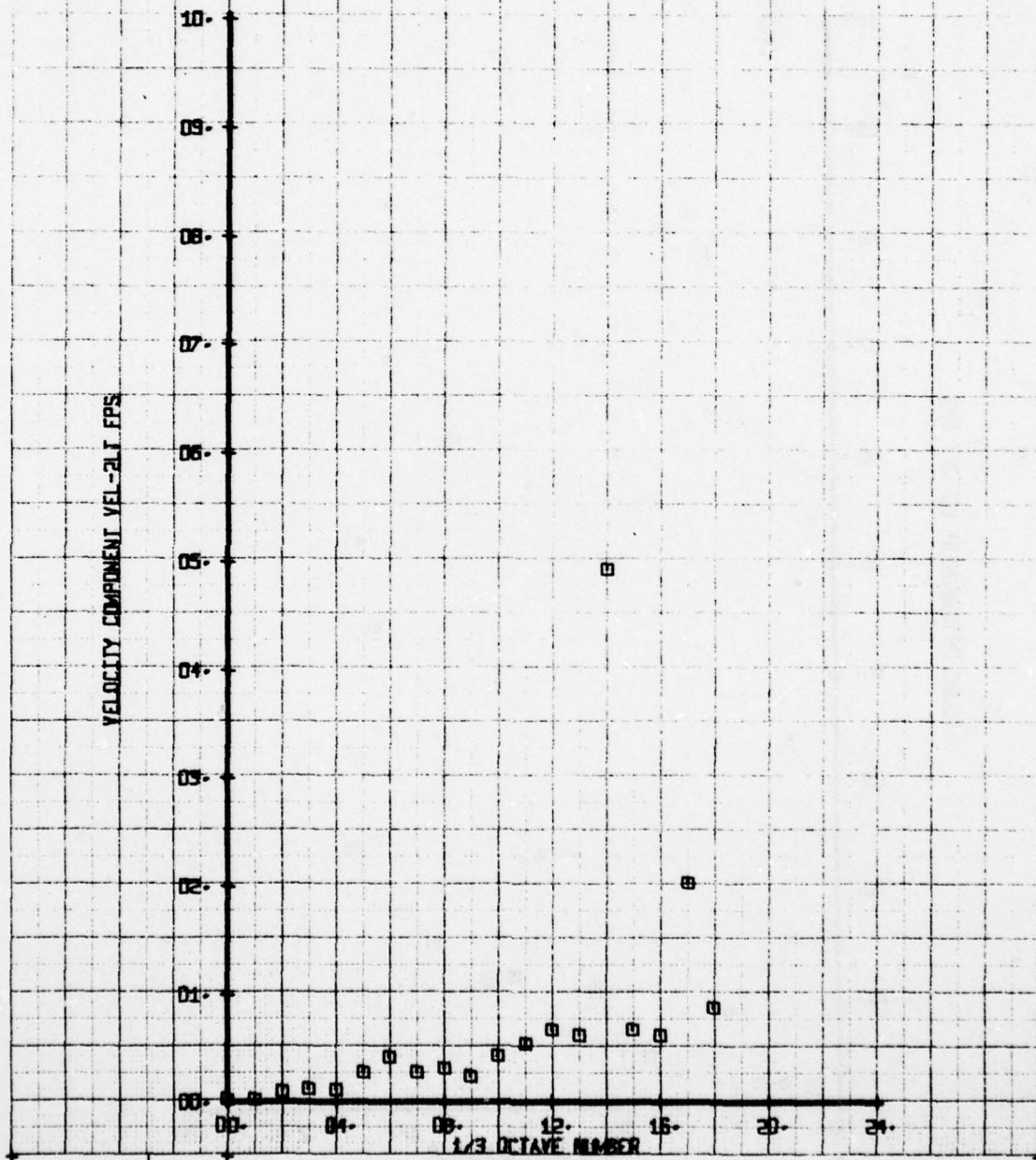
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/4 BODY 160- 2-00P BLOS  
 RUN 168 TP 10

SYM  
 0

CH  
 72

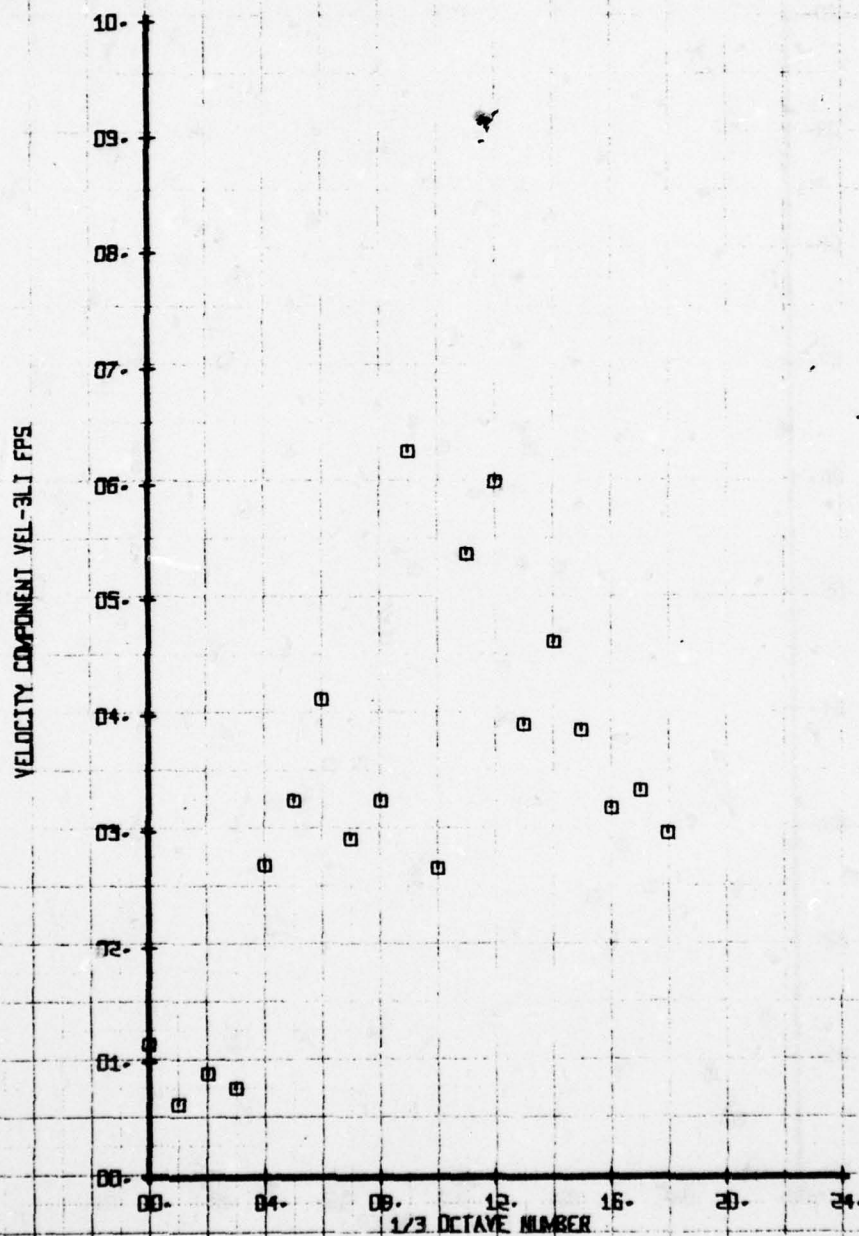
LEGEND  
 PARAMETER  
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



NOT FILM WARE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O USBY 160- 2-DBP BLOS  
 RUN 168 TP 4

LEGEND  
 CH PARAMETER  
 70 VEL-3LT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UDDY 160- 2-00P BLOS  
RUN 168 TP 5

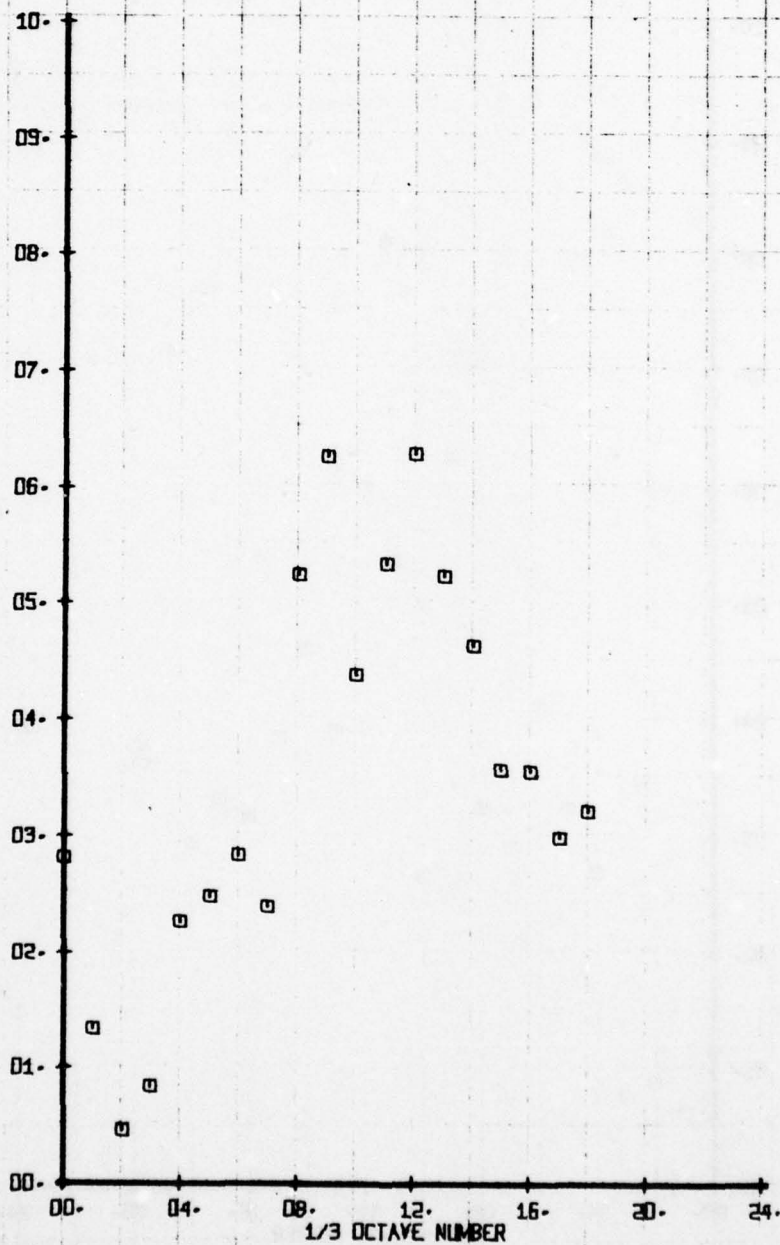
SYM  
□

LEGEND

CH  
70

PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



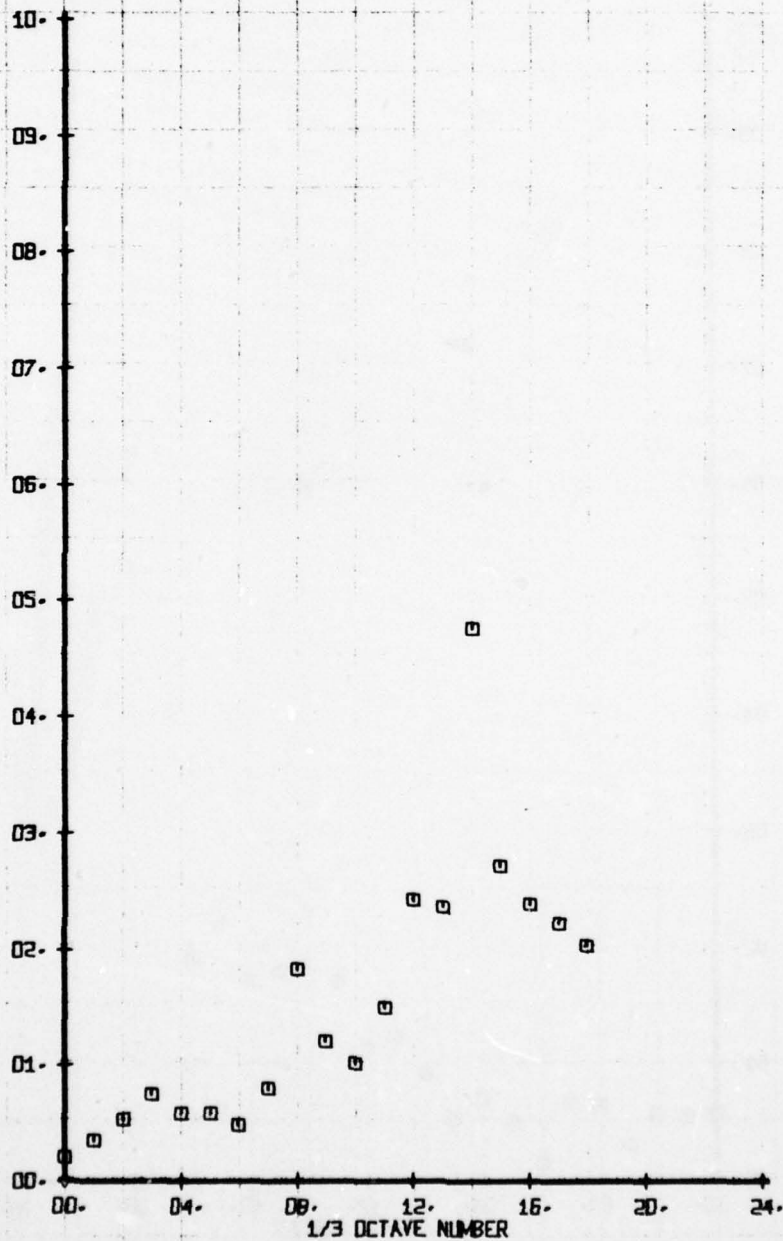
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN-EP W/O BODY 160-2-DBP BLOS  
 RUN 168 TP 6

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

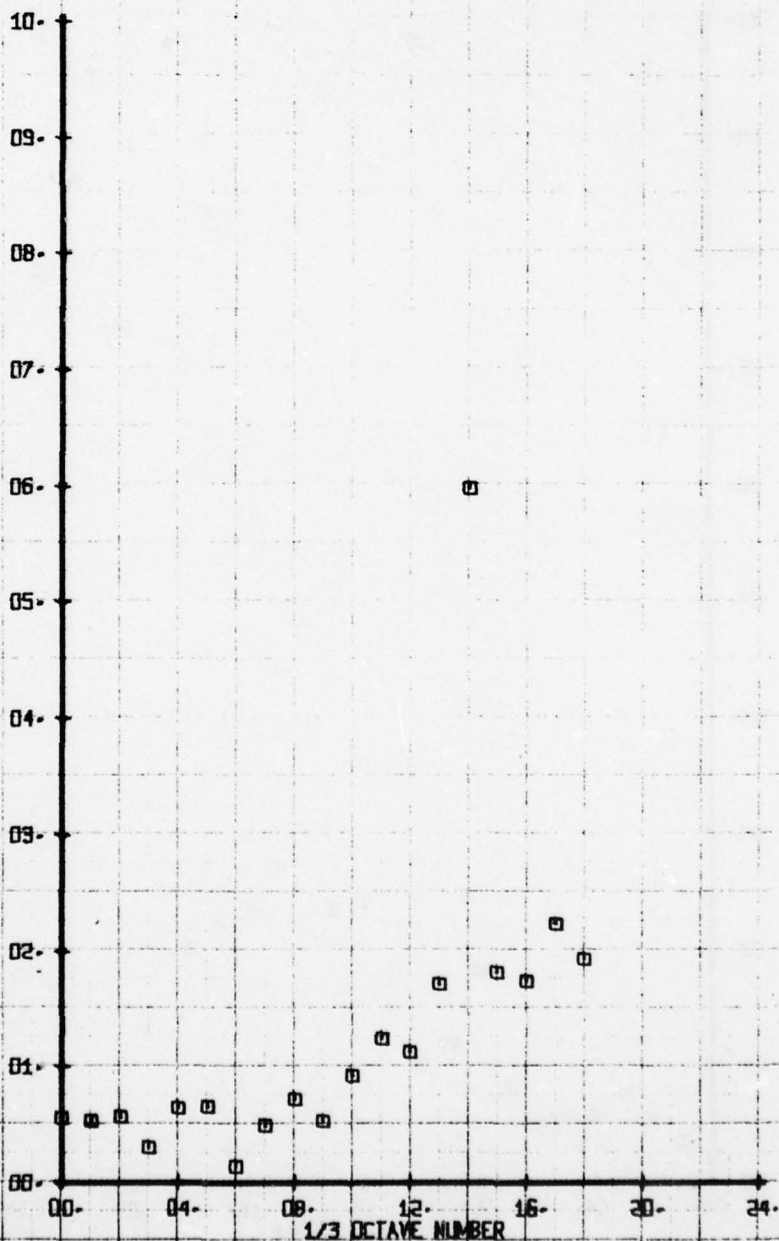


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBOY 160- 2-00P BLOS  
RUN 168 TP 7

SYM  
□

LEGEND  
CH 70  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





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BOEING VERTOL CO PHILADELPHIA PA

F/G 1/3

INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONFI--ETC(U)

SEP 78 P F SHERIDAN

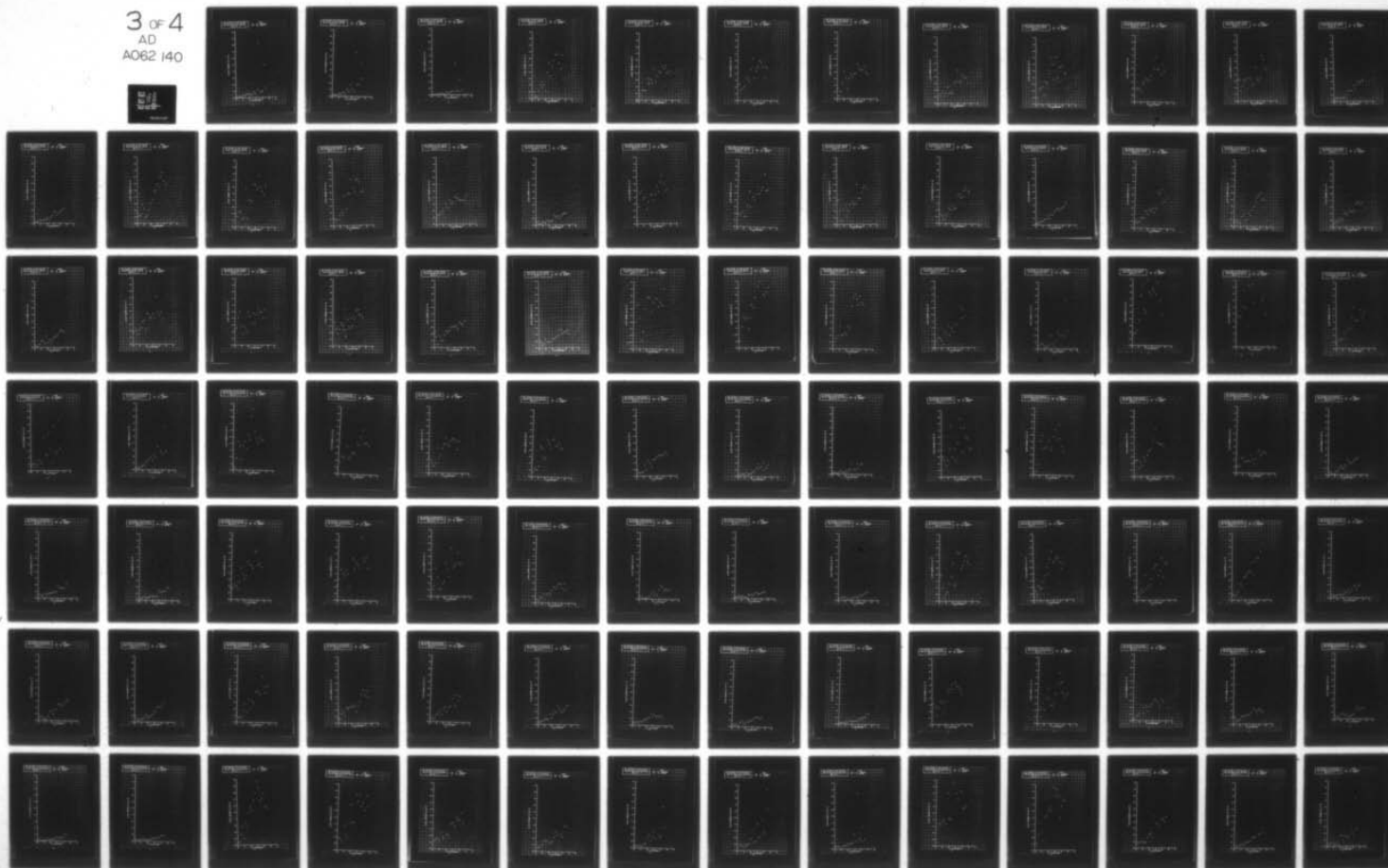
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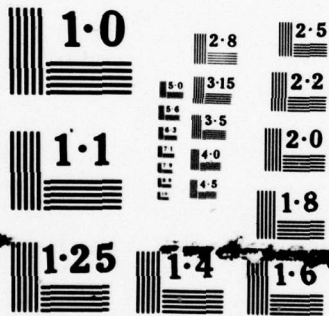
UNCLASSIFIED

USARTL-TR-78-23F-V-6-C

NL

3 of 4  
AD  
A062 140



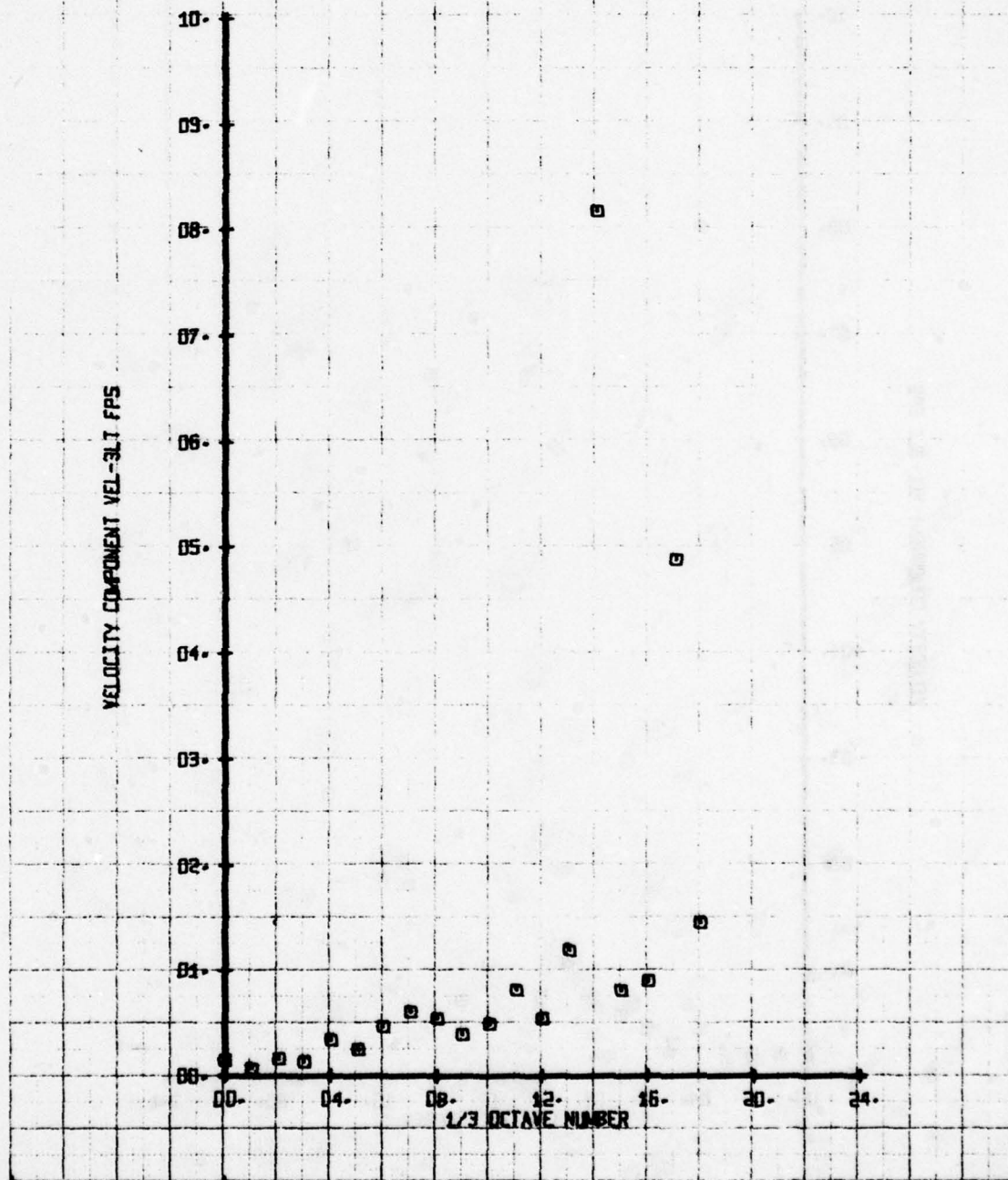


NATIONAL BUREAU OF STANDARDS  
MICROCOPY RESOLUTION TEST CHART

HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBODY 160 2-06P 8LOS  
 RUN 168 TP 8

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





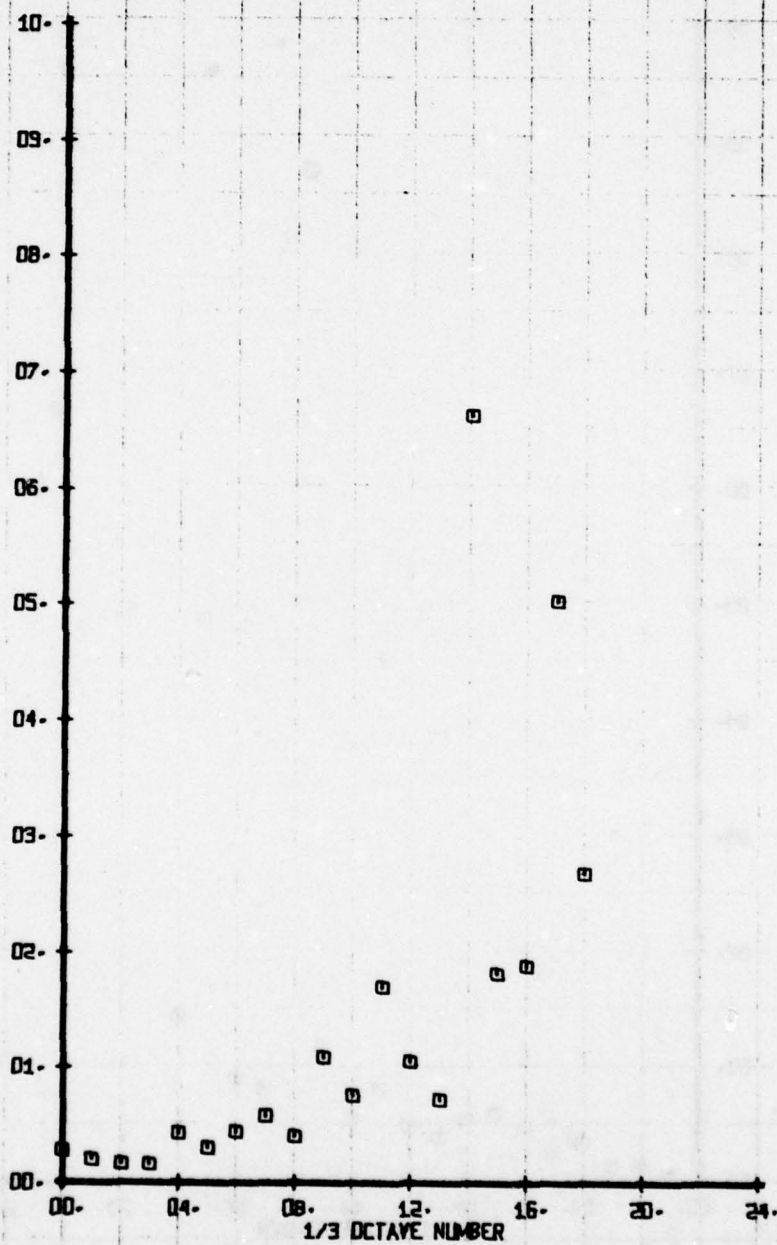
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBODY 160-2-06P BLOS  
RUN 188 TP 9

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



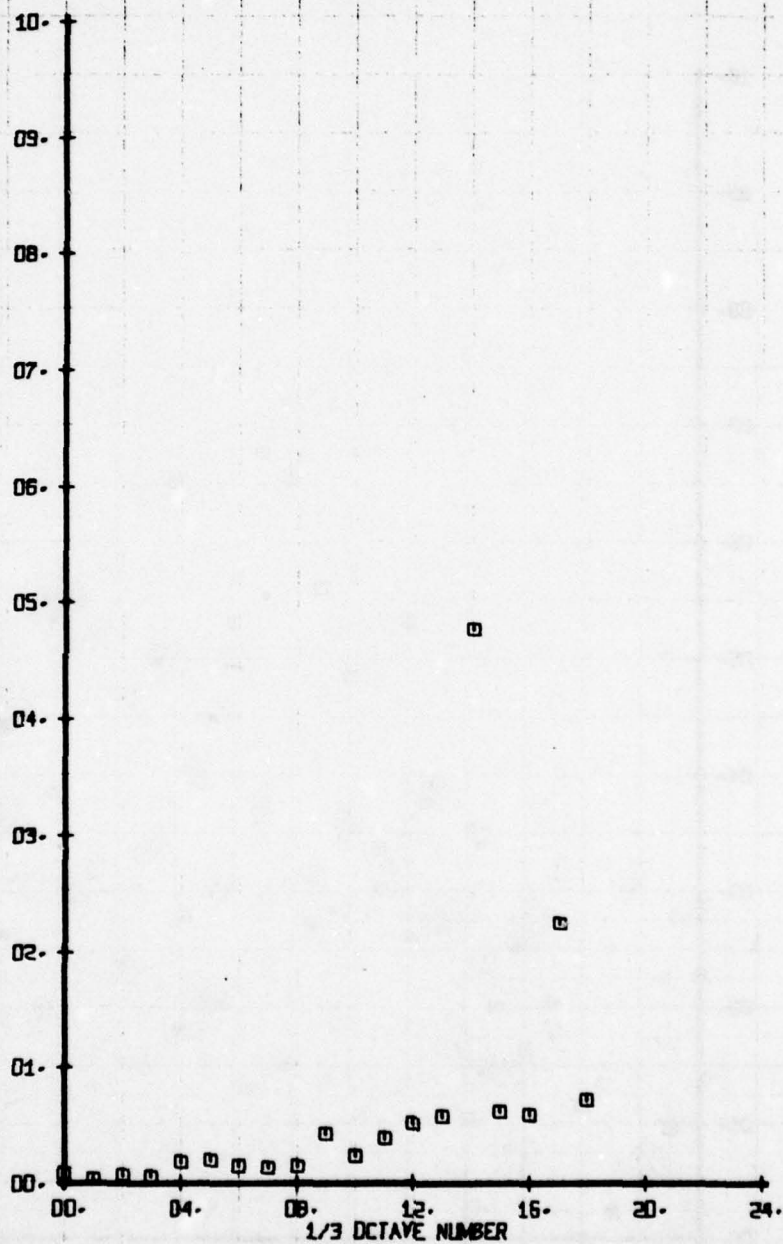
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160- 2-00P BLOS  
 RUN 168 TP 10

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

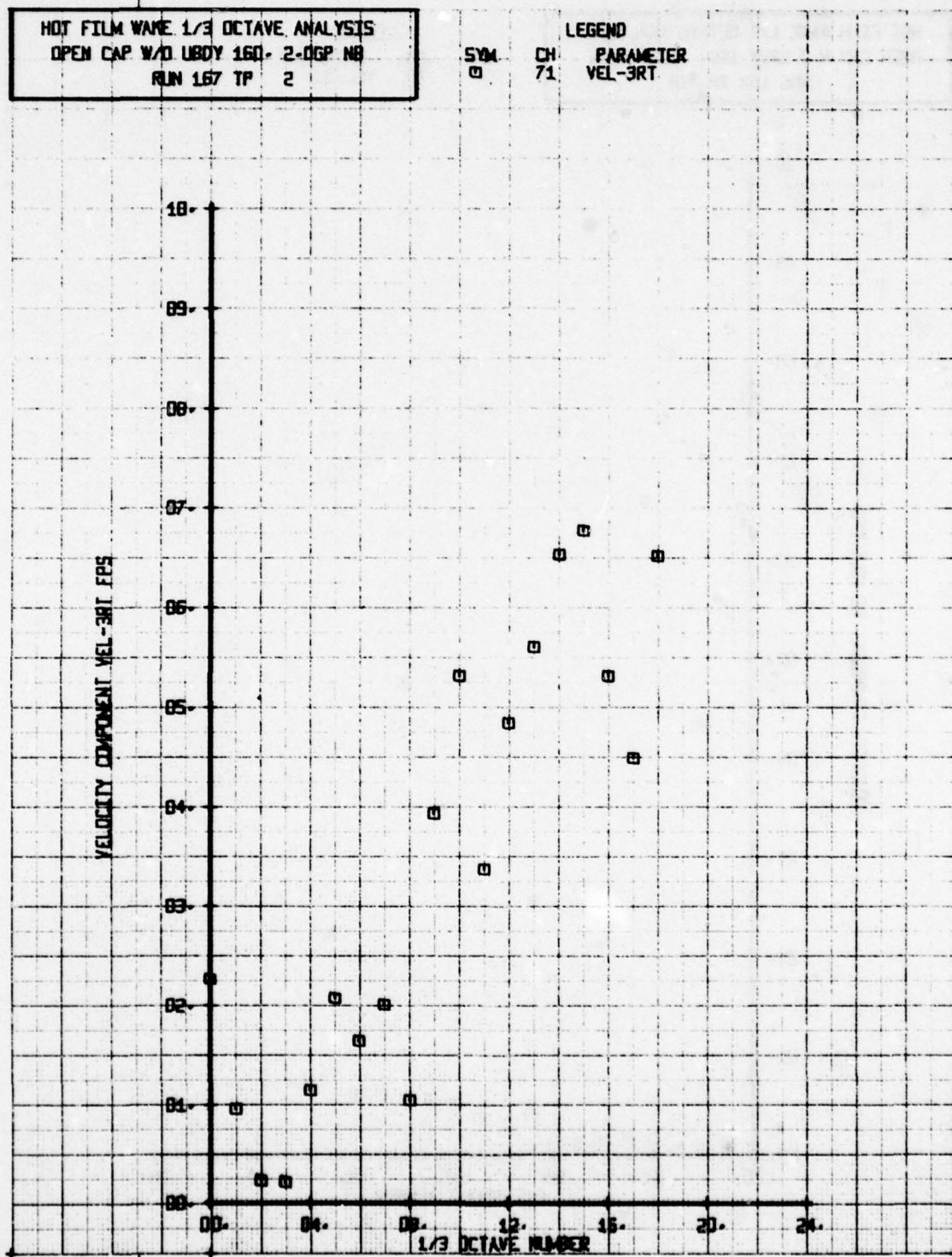
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBOY 160- 2-DGP NB  
RUN 167 TP 2

SYM  
□

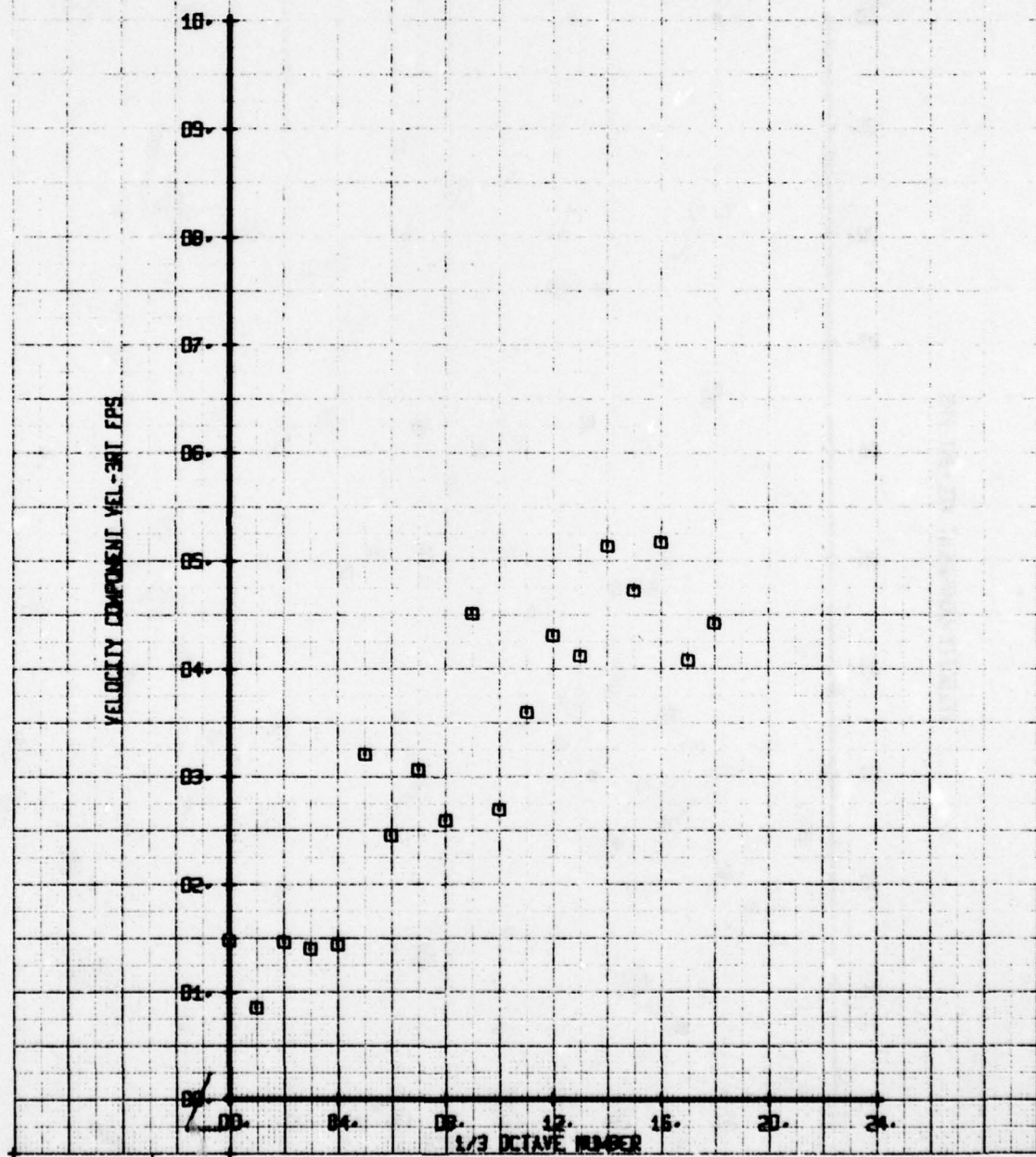
LEGEND  
CH: 71  
PARAMETER  
VEL-3RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UDDY 160- 2-OGP N8  
 RUN 167 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



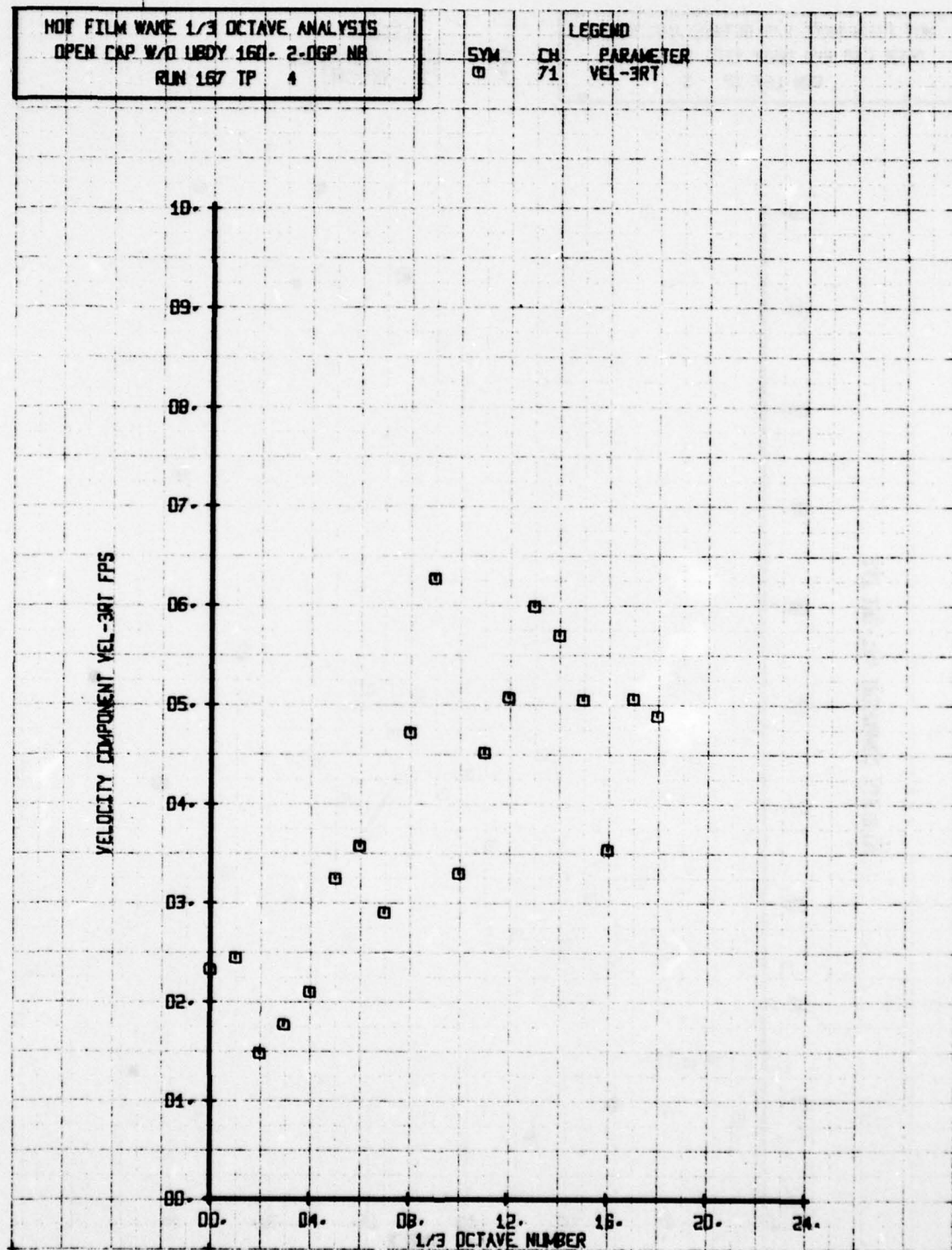
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O BODY 160. 2-DGP NB  
 RUN 167 TP 4

SYM  
 □

CH  
 71

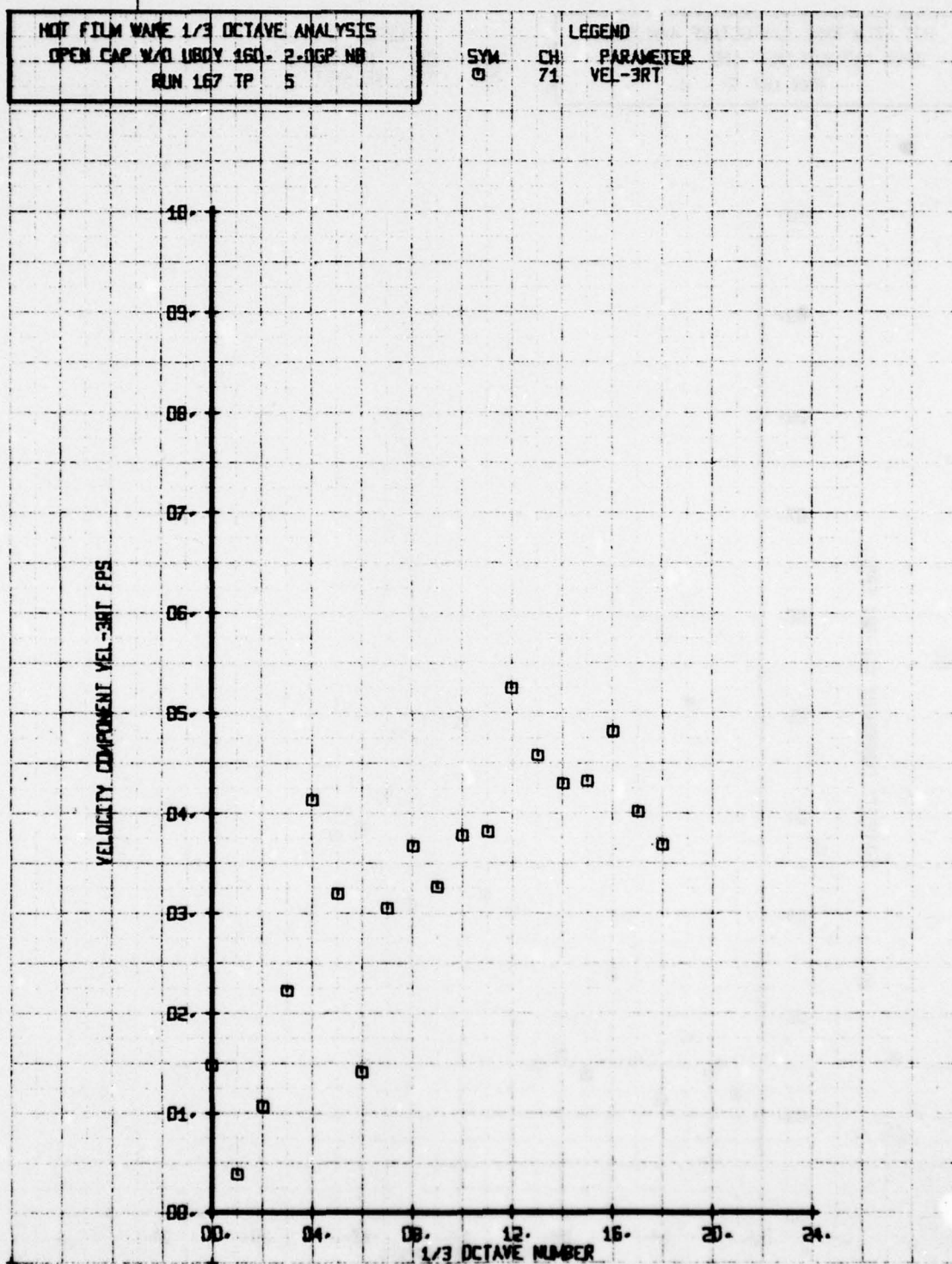
LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160. 2-OGP NB  
 RUN 167 TP 5

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT

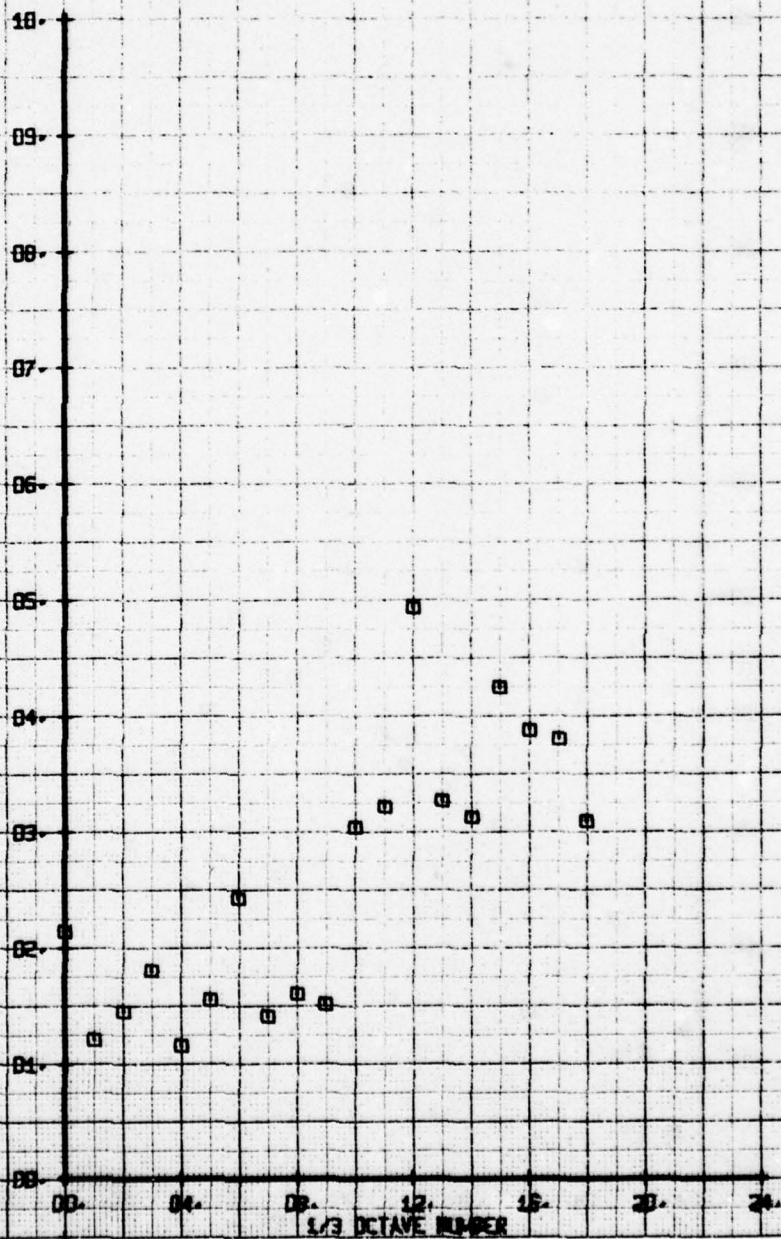




HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160- 2-0GP NB  
 RUN 167 TP 6

SYM CH PARAMETER  
 0 71 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

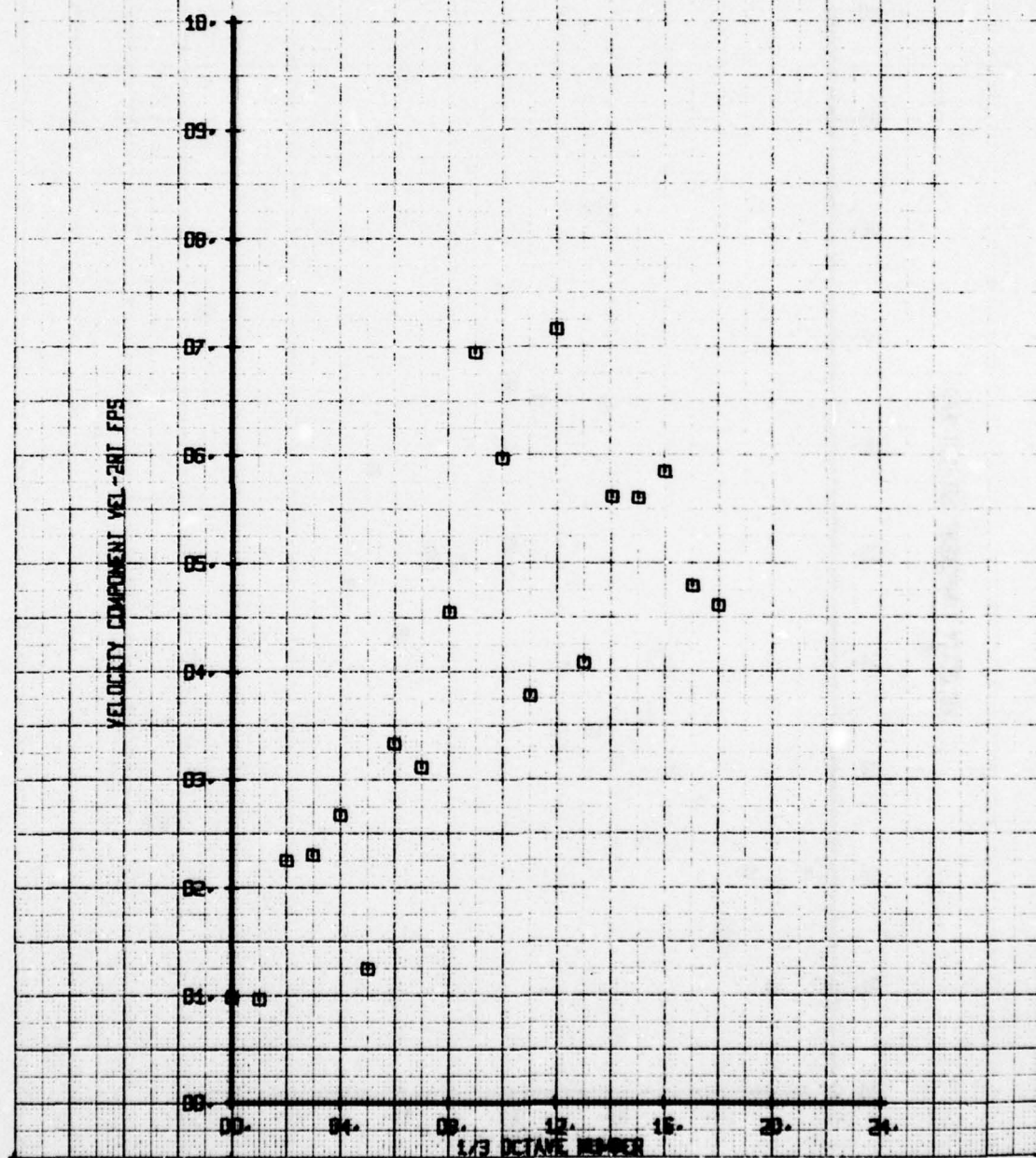


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160- 2-OGP NR  
 RUN 167 TP 2

SYM  
 □

CH  
 75

LEGEND  
 PARAMETER  
 VEL-2RT



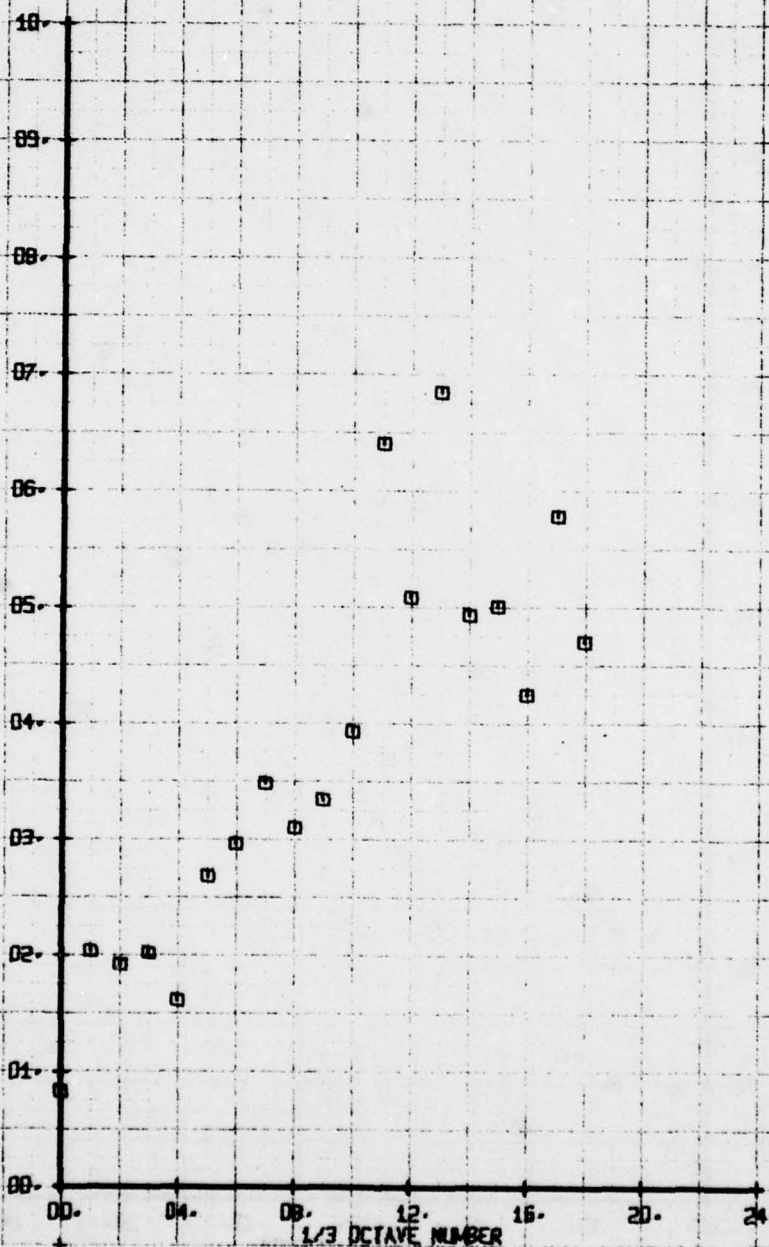
NOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UROY 160. 2-0GP NB  
 RUN 167 TP 3

SYM  
 0

CH  
 75

LEGEND  
 PARAMETER  
 VEL-2RT

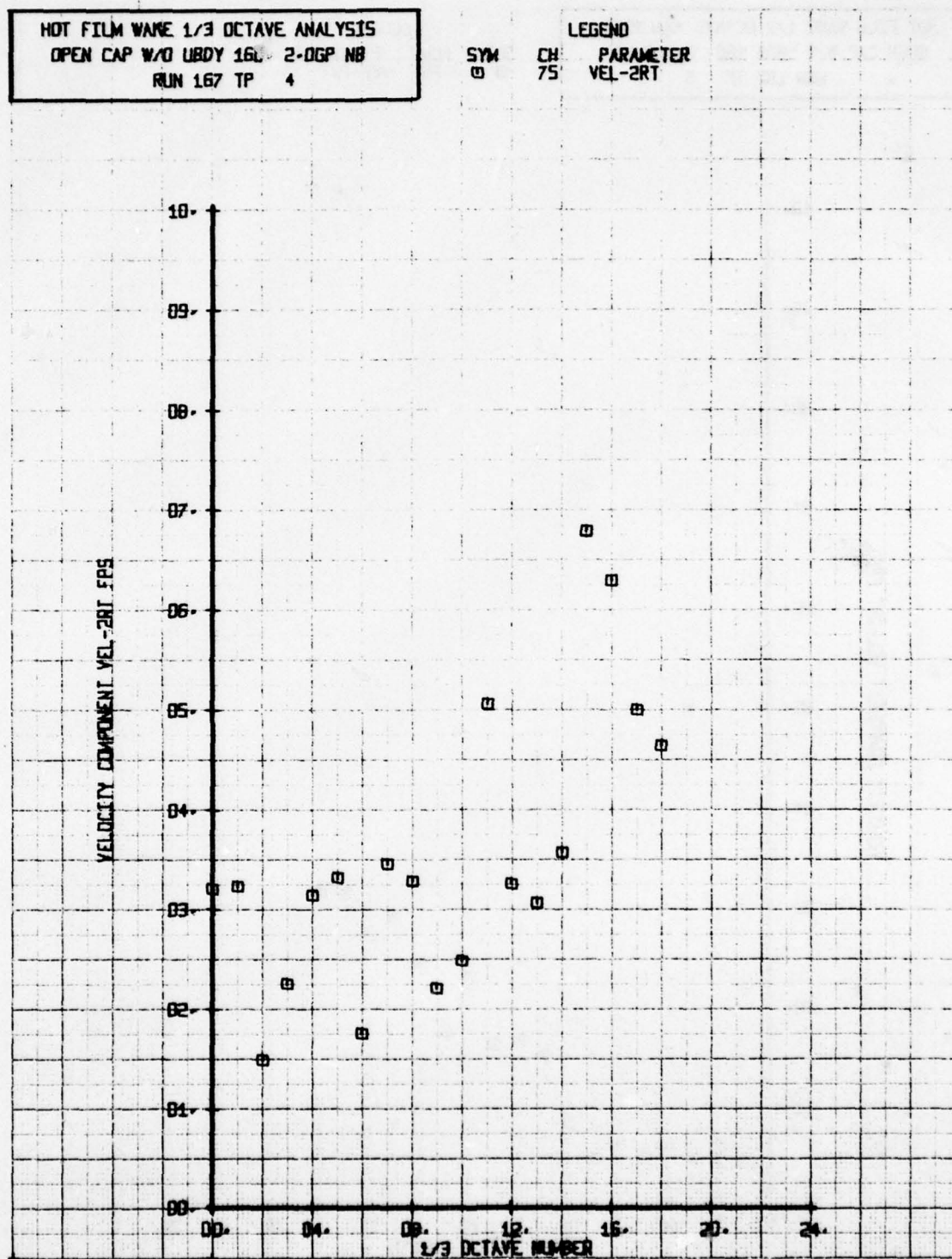
VELOCITY COMPONENT VEL-2RT FPS





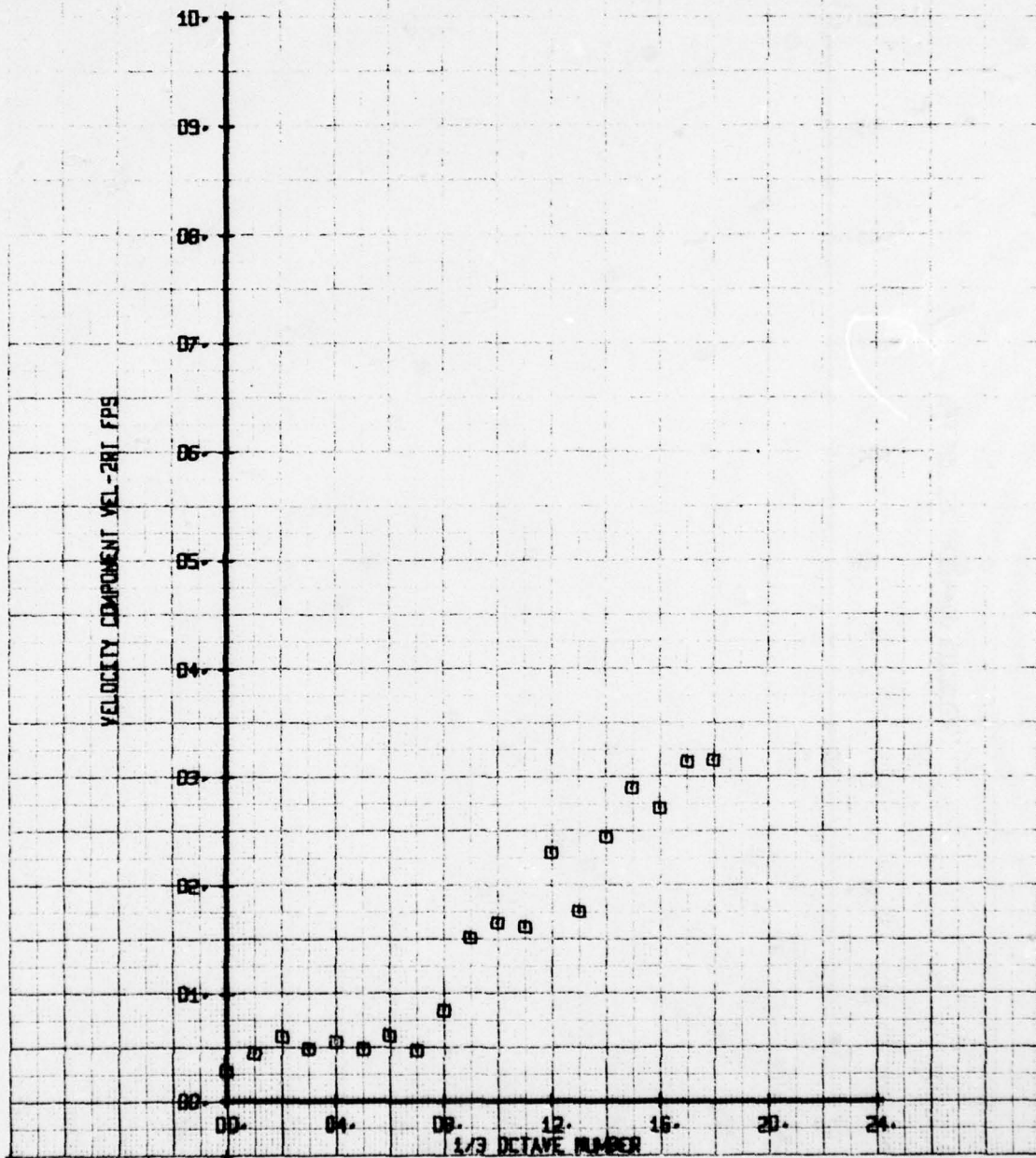
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBDY 160 2-OGP NB  
 RUN 167 TP 4

LEGEND  
 SYM CH: PARAMETER  
 □ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O BODY 160- 2-OGP NB  
 RUN 167 TP 5

SYM	CH	PARAMETER
□	75	VEL-2RT



# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W/D BODY 160, 2-DGP NB

RUN 167 TP 6

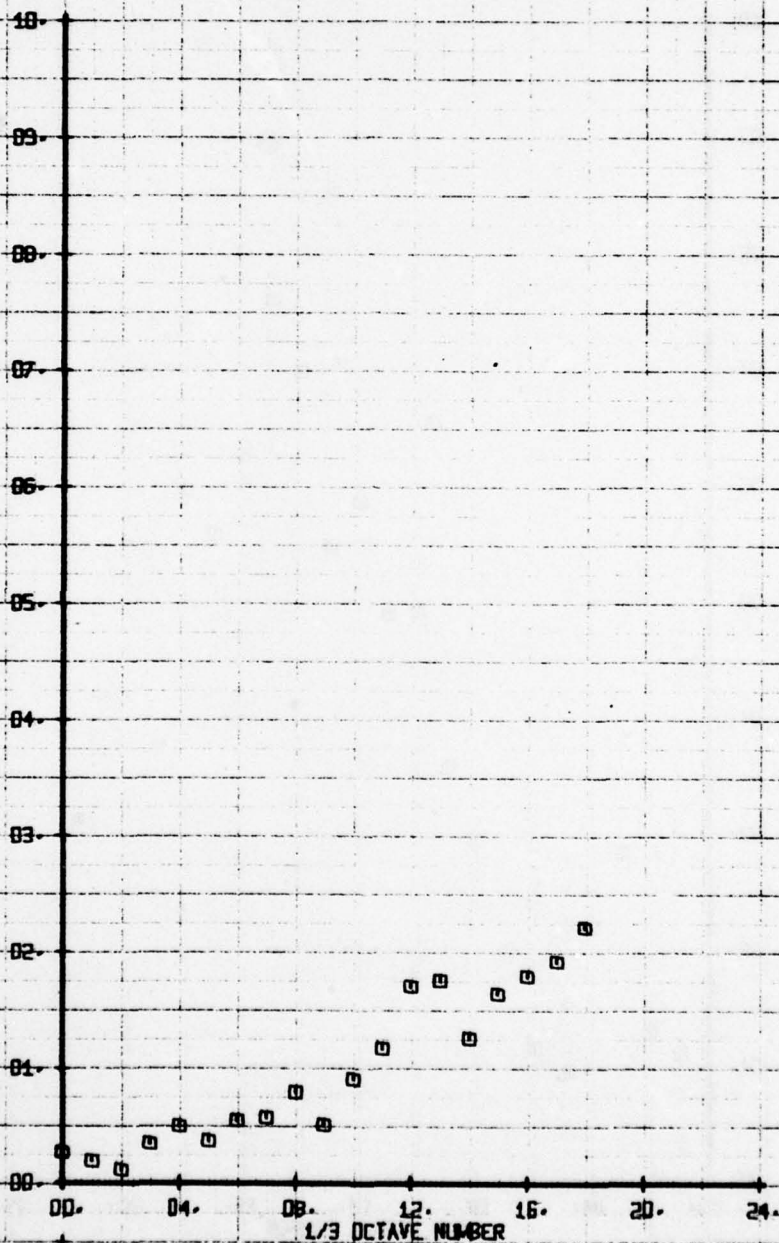
SYM  
□

CH  
75

## LEGEND

PARAMETER  
VEL-2RT

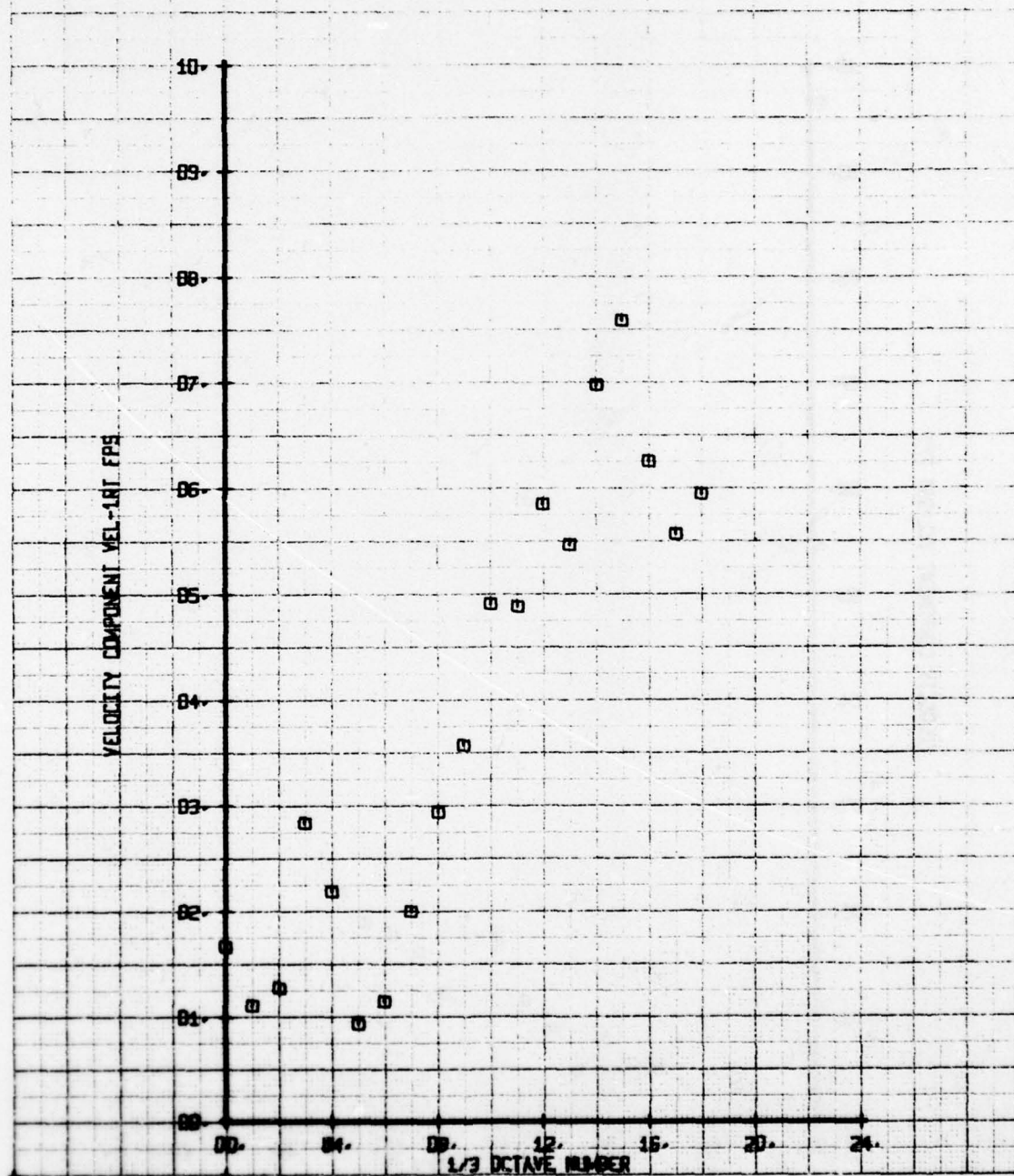
VELOCITY COMPONENT VEL-2RT FPS





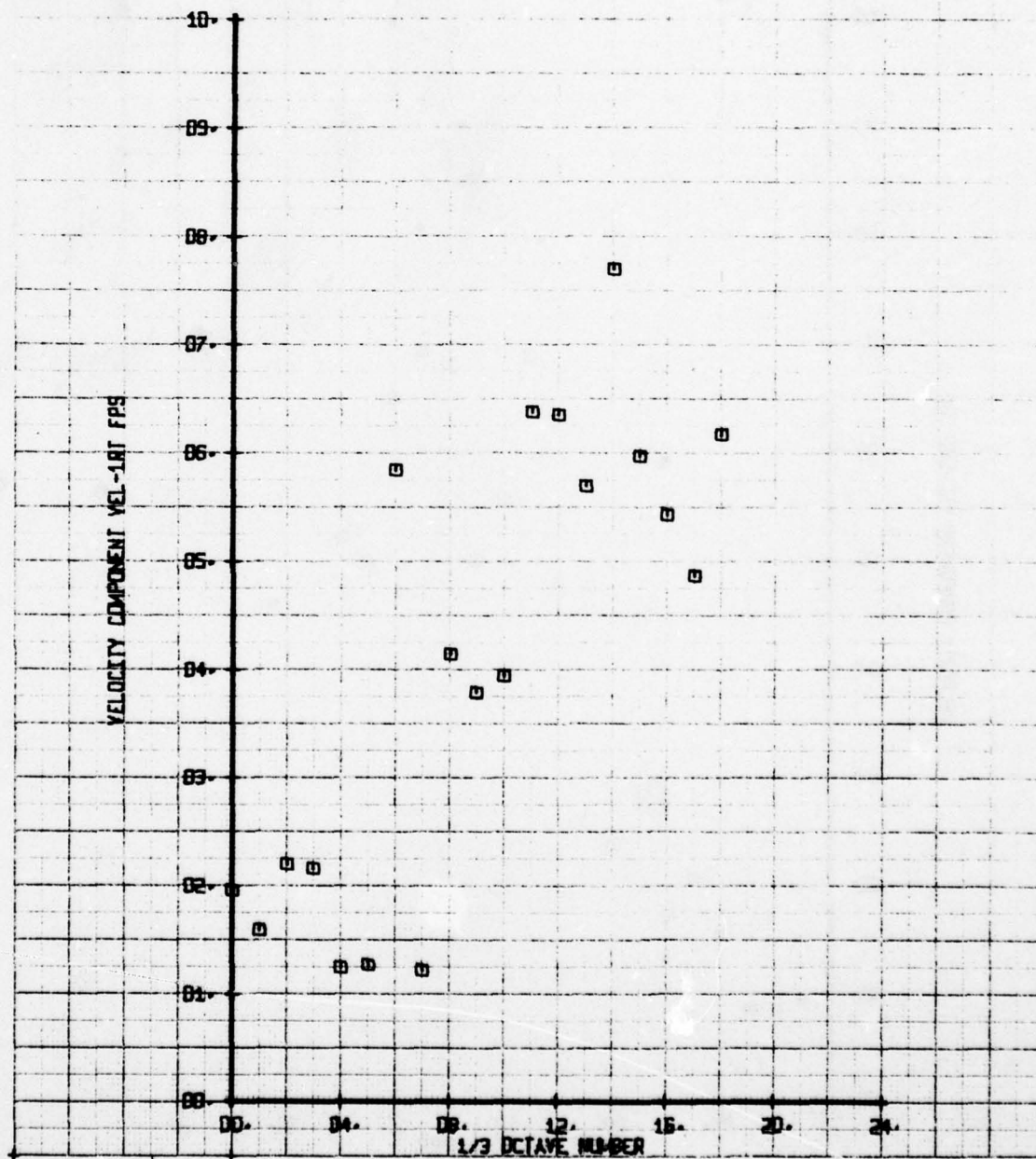
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/D UBOY 160- 2-DGP NB  
 RUN 167 TP 2

LEGEND  
 CH PARAMETER  
 74 VEL-1RT



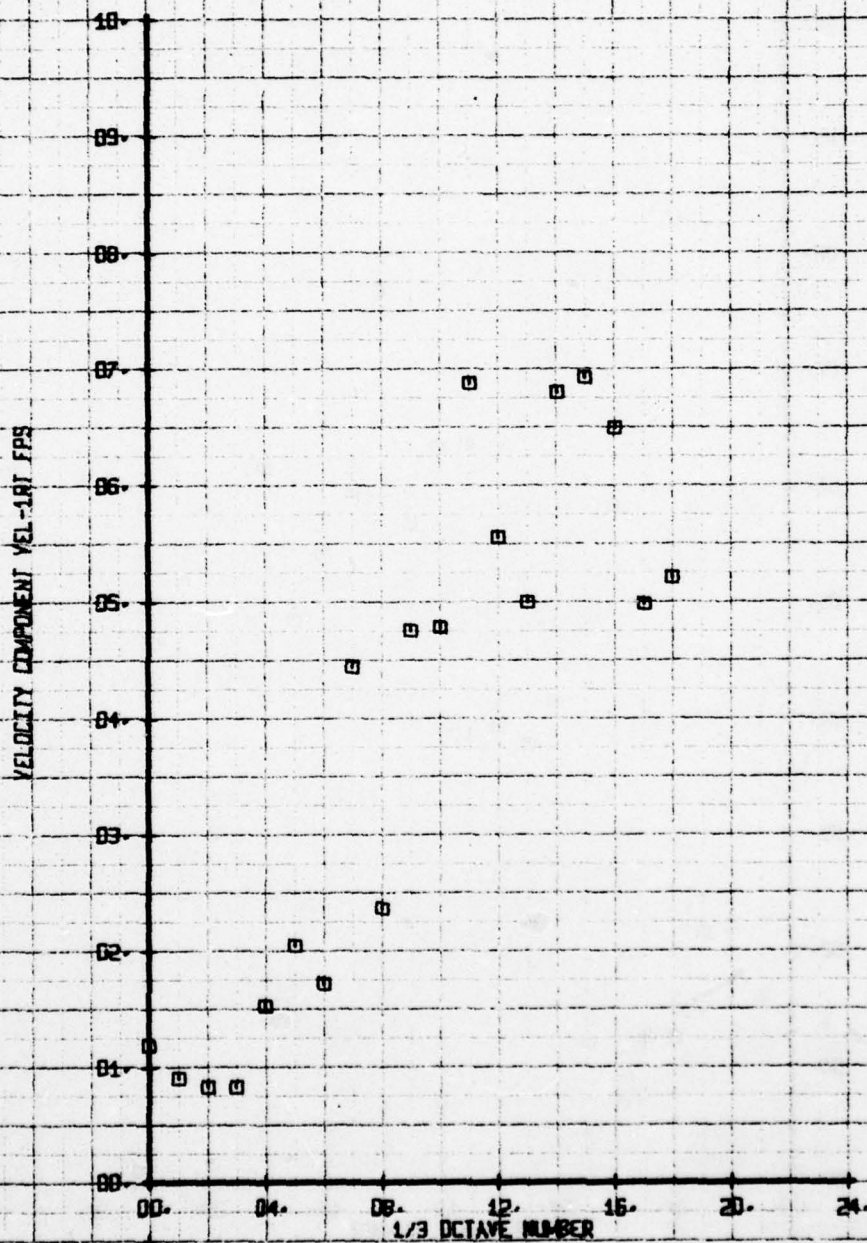
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O LBOY 160- 2-OGP NB  
 RUN 167 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O BODY 160. 2-0GP NR  
 RUN 187 TP 4

LEGEND  
 CH 74  
 PARAMETER  
 VEL-1RT

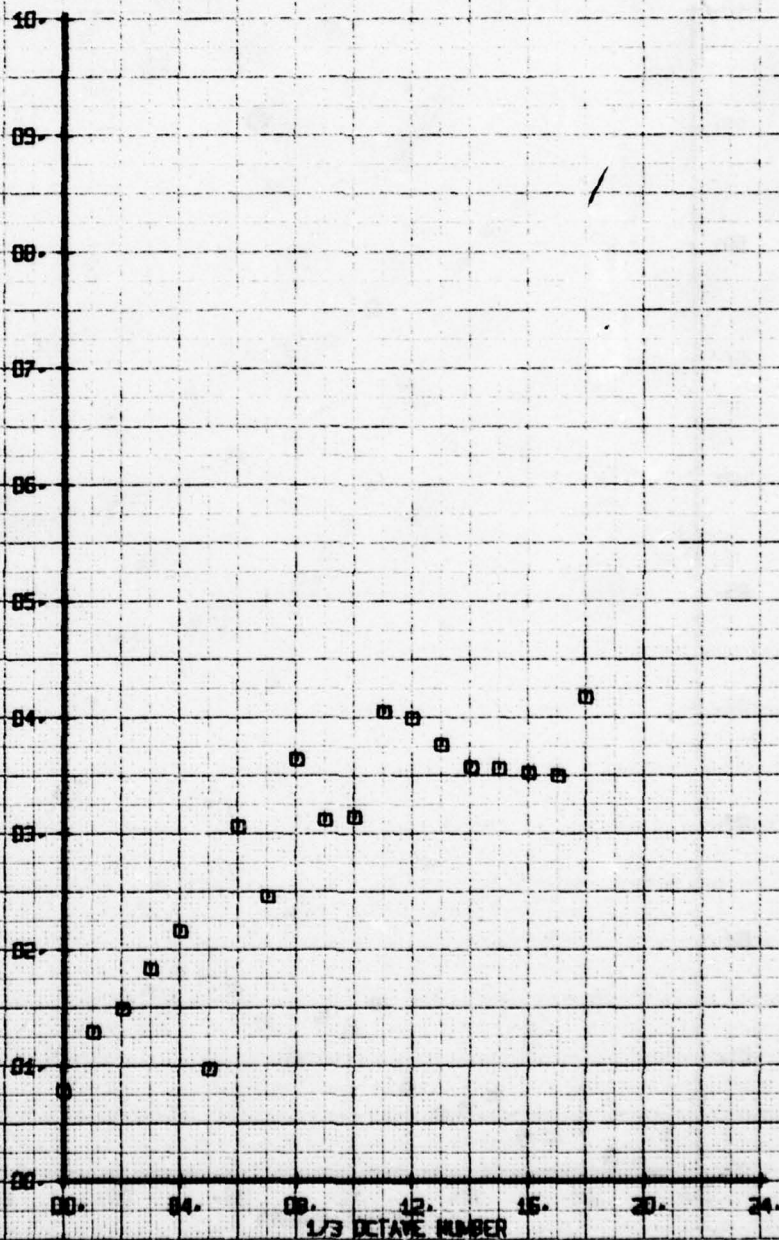




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP. W/D LB0Y 160. 2.0GP MB  
 RUN 167 TP 5

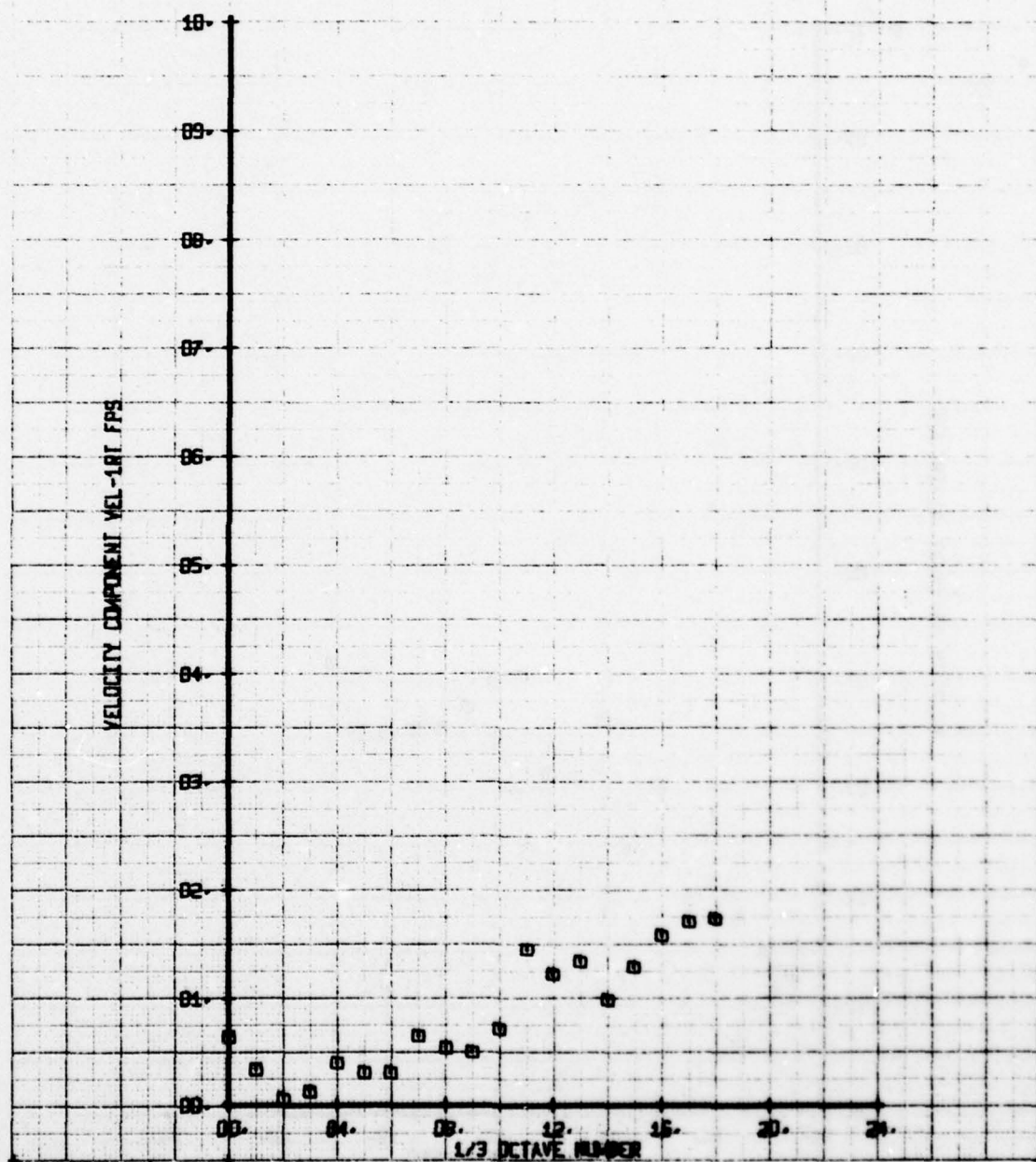
SYM	CH	PARAMETER
0	74	VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



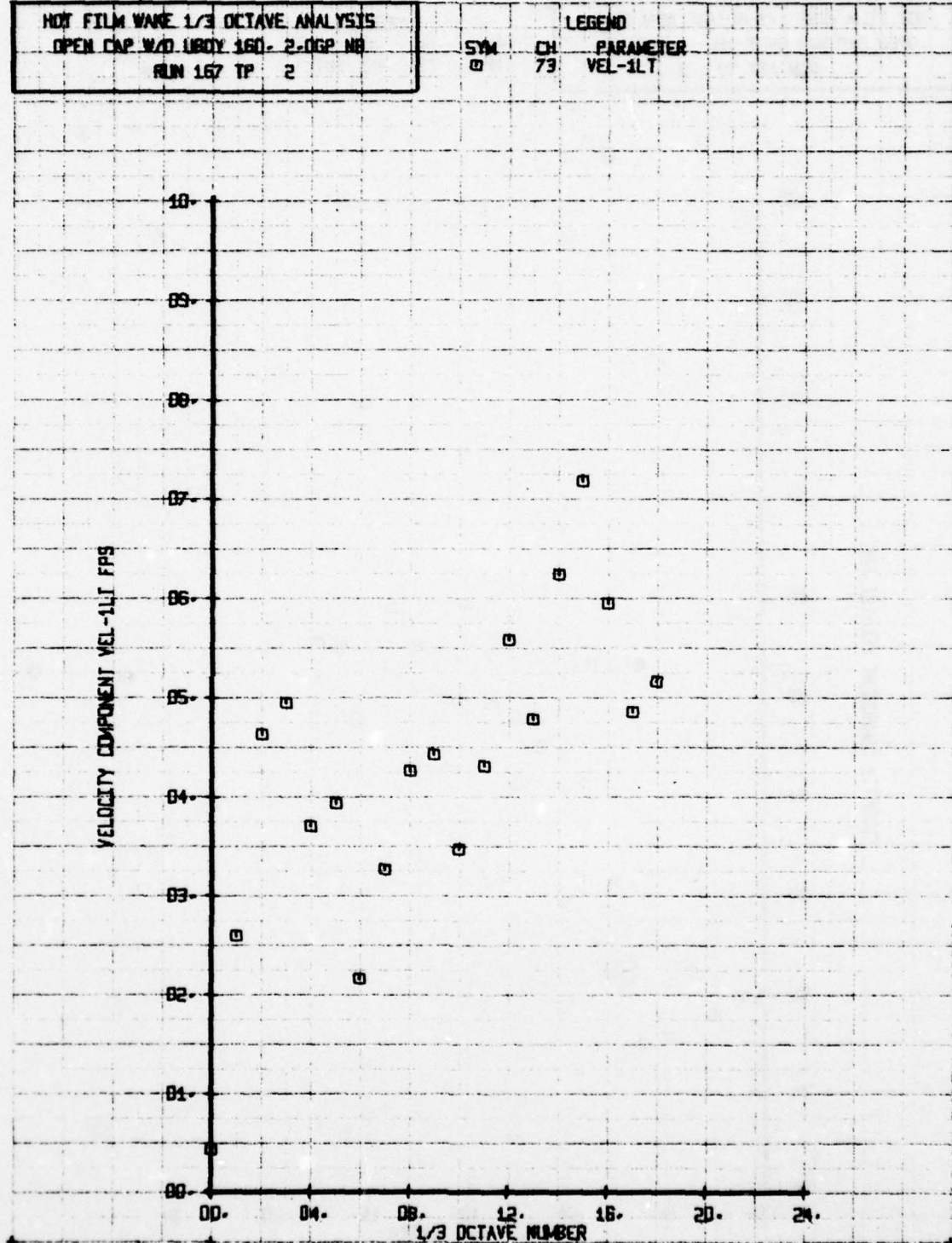
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O LUBOY 160- 2-OGP NB  
 RUN 167 TP 6

LEGEND  
 SYM CH PARAMETER  
 □ 74 VEL-1RT

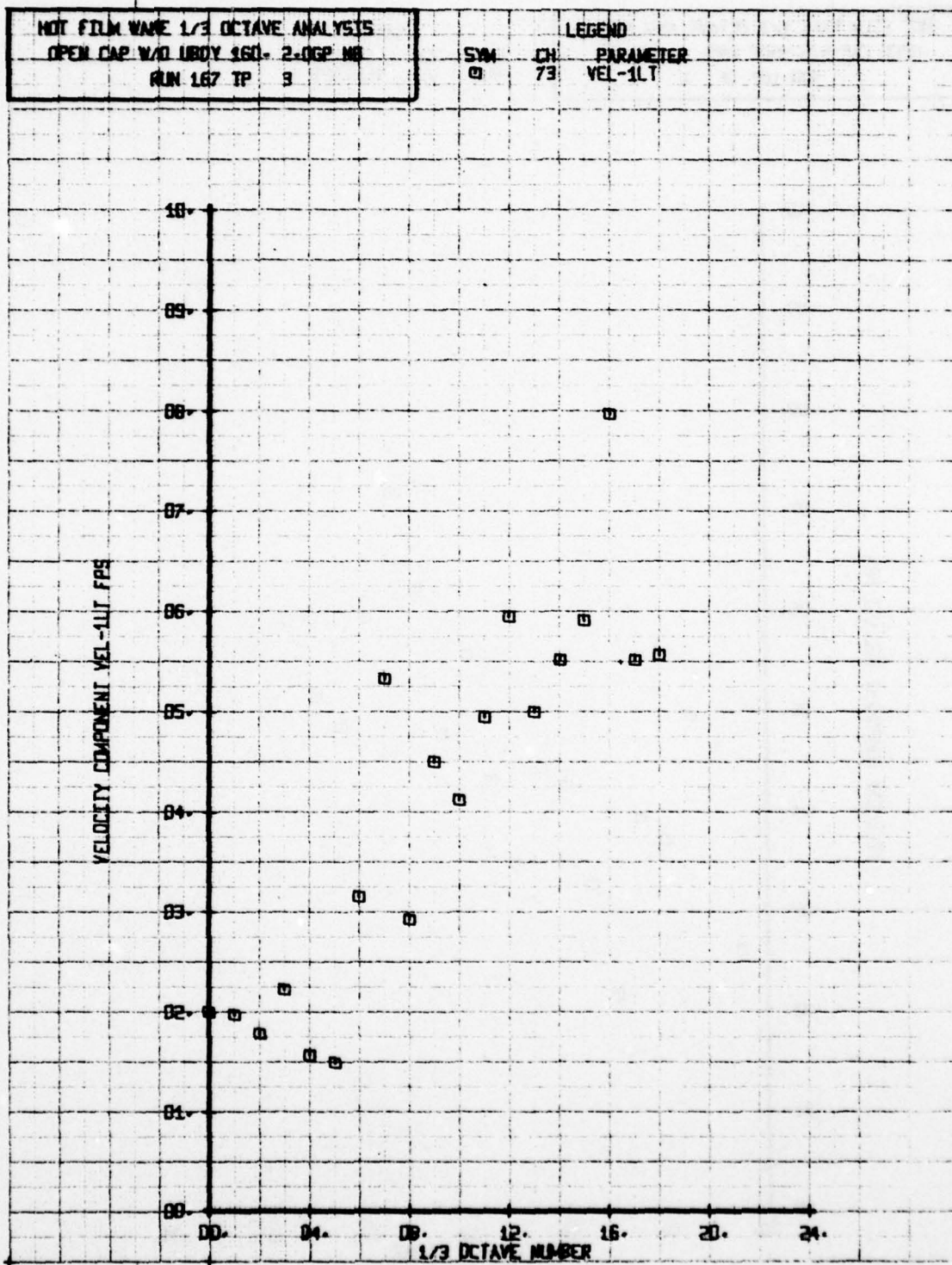


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/D LB0Y 160- 2-0GP NB  
 RUN 167 TP 2

SYM CH PARAMETER  
 0 73 VEL-1LT

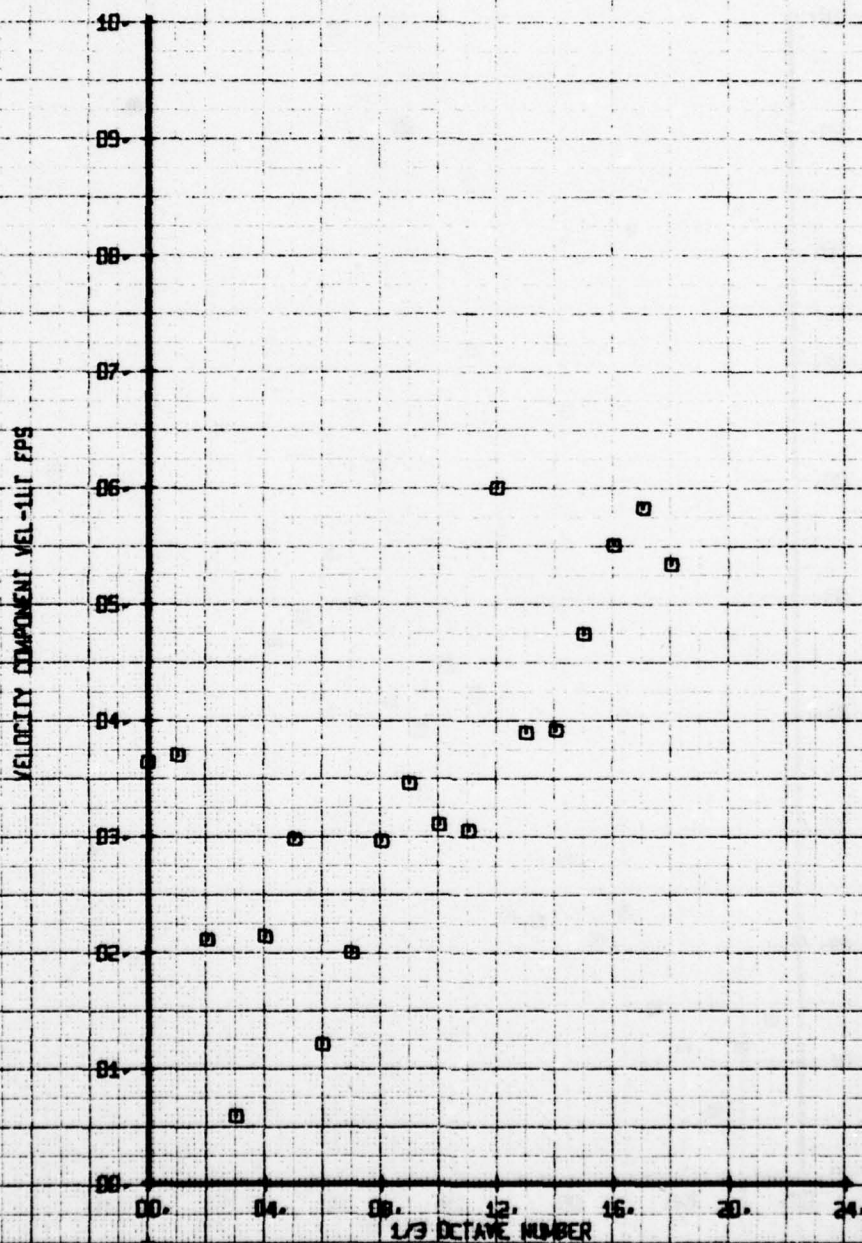






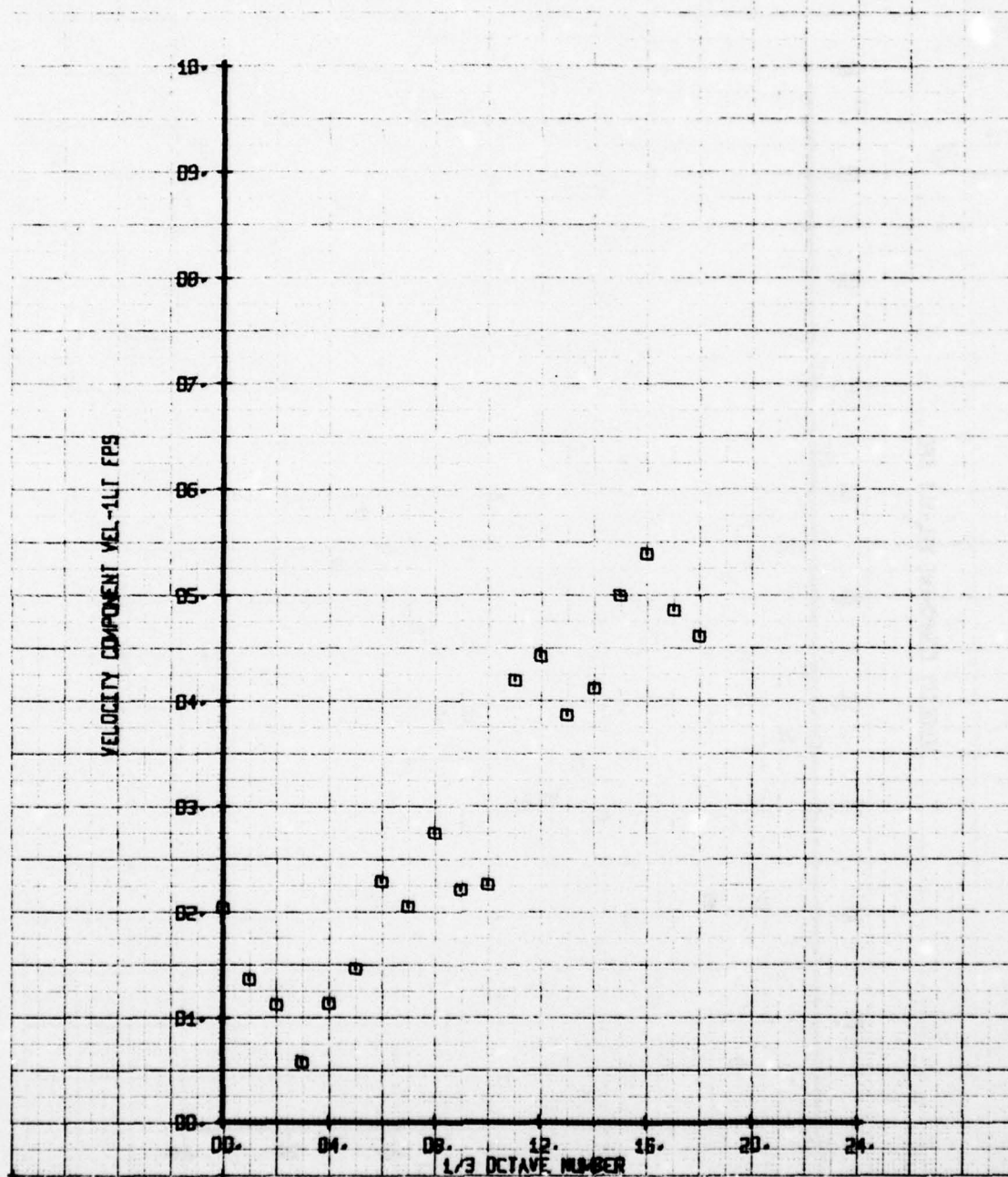
NOIT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O LUBOY 160. 2-DEP NR  
 RUN 167 TP 4

LEGEND  
 SYM CH PARAMETER  
 □ 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O LUBDY 160- 2-0GP M8  
 RUN 167 TP 5

LEGEND  
 SYM CH PARAMETER  
 □ 73 VEL-1LT





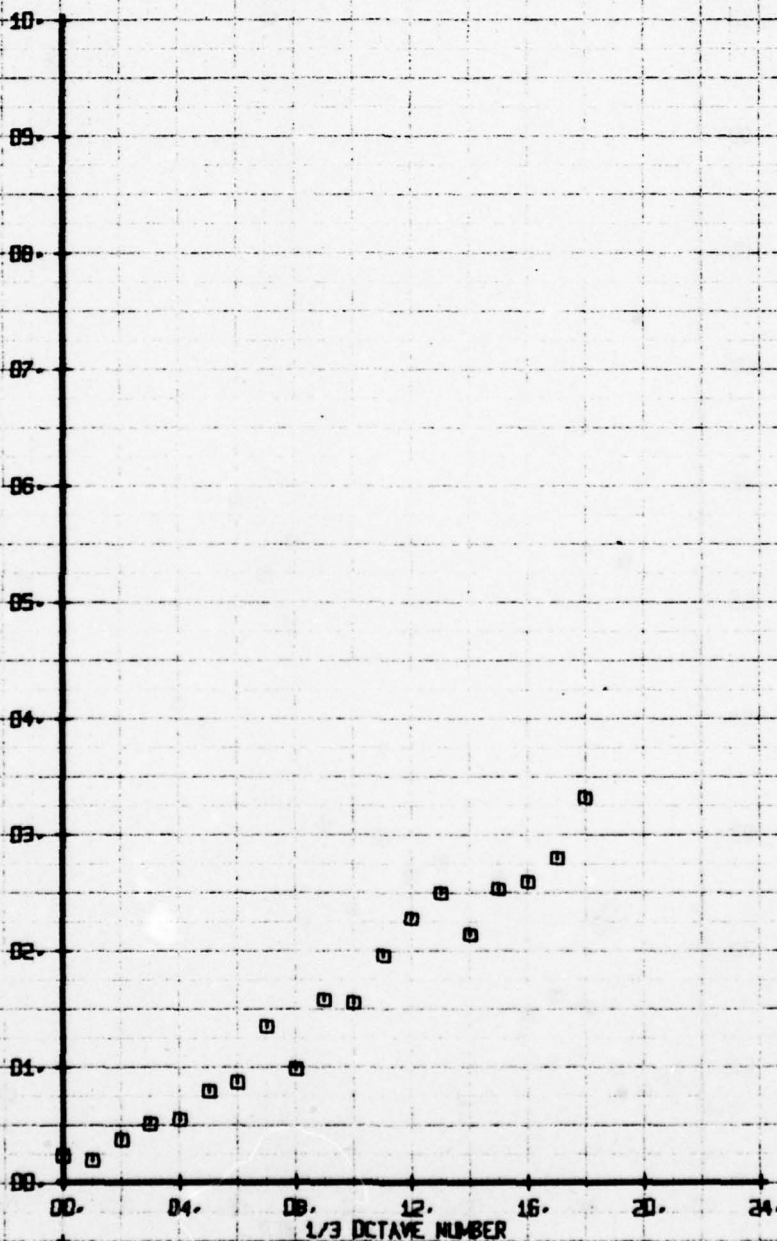
NOT FILM WAVE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O UBOY 160. 2-0GP NO  
RUN 167 TP 6

SYM  
□

LEGEND

CH 73  
PARAMETER  
VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



HOT FILM WARE 1/3 OCTAVE ANALYSIS

OPEN CAP W/D BODY 160- 2-0GP NB

RUN 167 TP 2

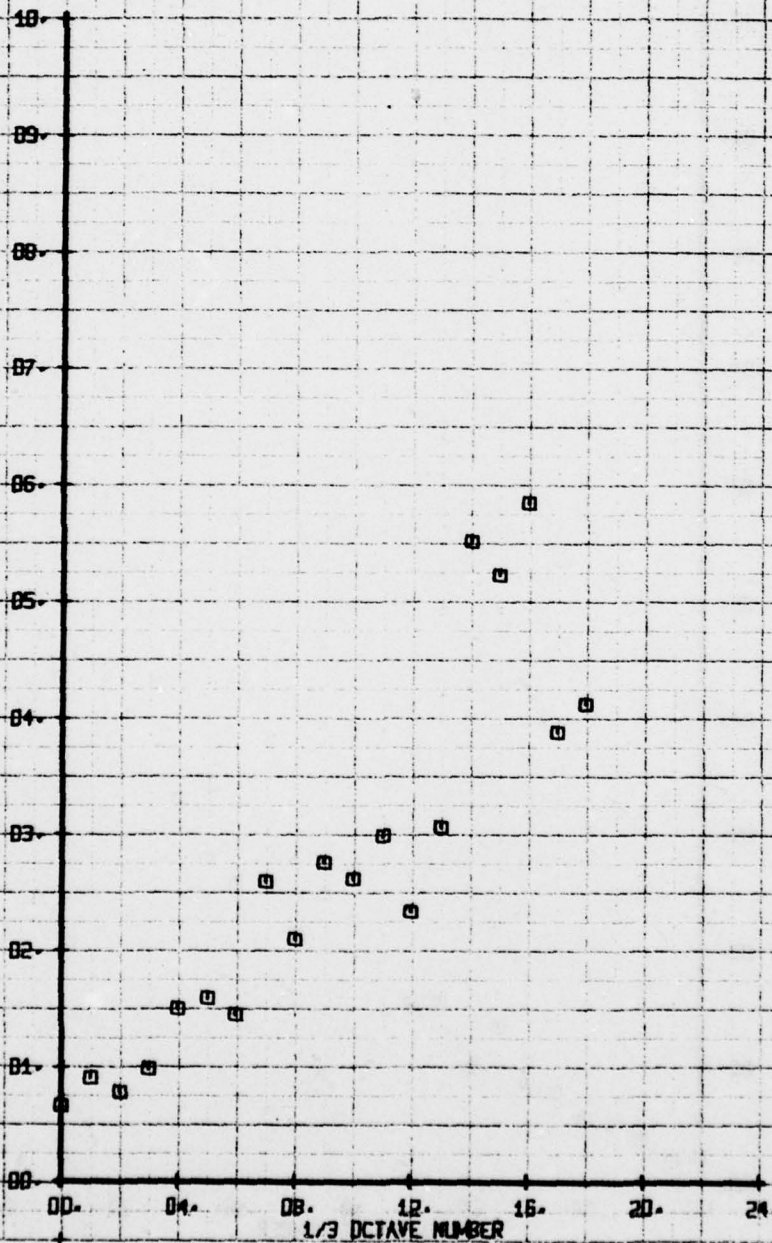
SYM  
□

CH  
72

LEGEND

PARAMETER  
VEL-ZLT

VELOCITY COMPONENT VEL-ZLT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

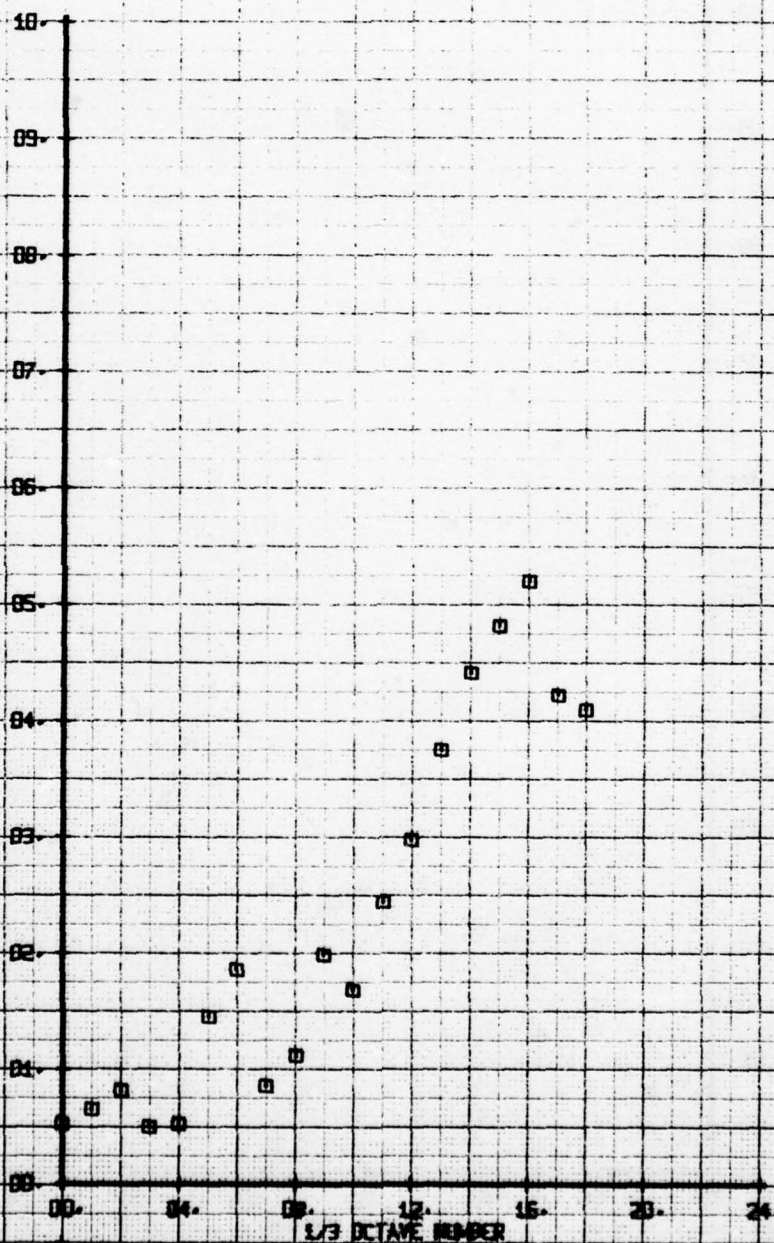
OPEN CAP W/O LBDY 160- 2-0GP NB

RUN 167 TP 3

SYM  
□

LEGEND  
CH 72  
PARAMETER  
VEL-2LT

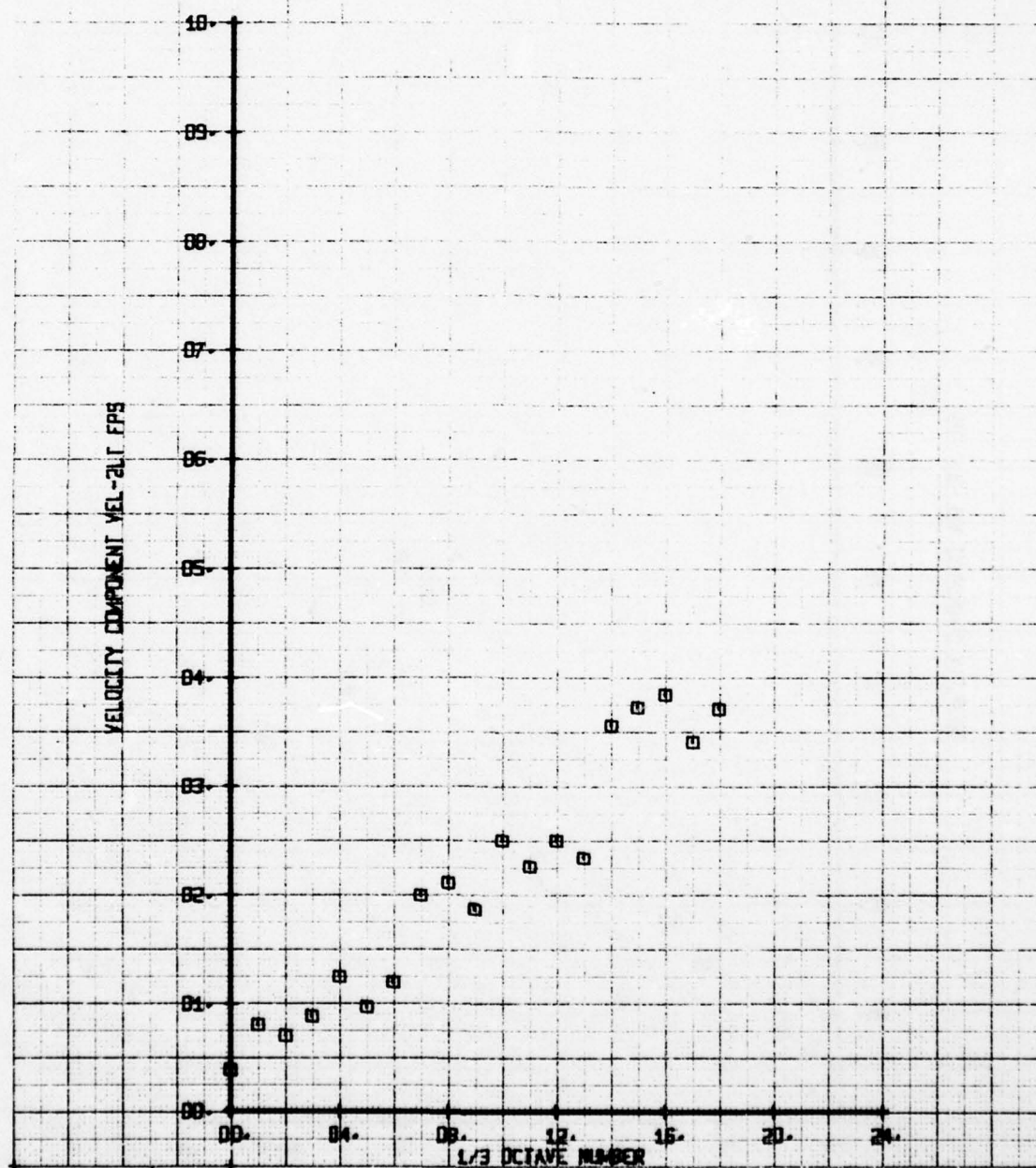
VELOCITY COMPONENT VEL-2LT EPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W/O BODY 160- 2-0GP NB  
RUN 187 TP 4

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT



# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W/D UBOY 160 - 2-DCP NO

RUN 167 TP 5

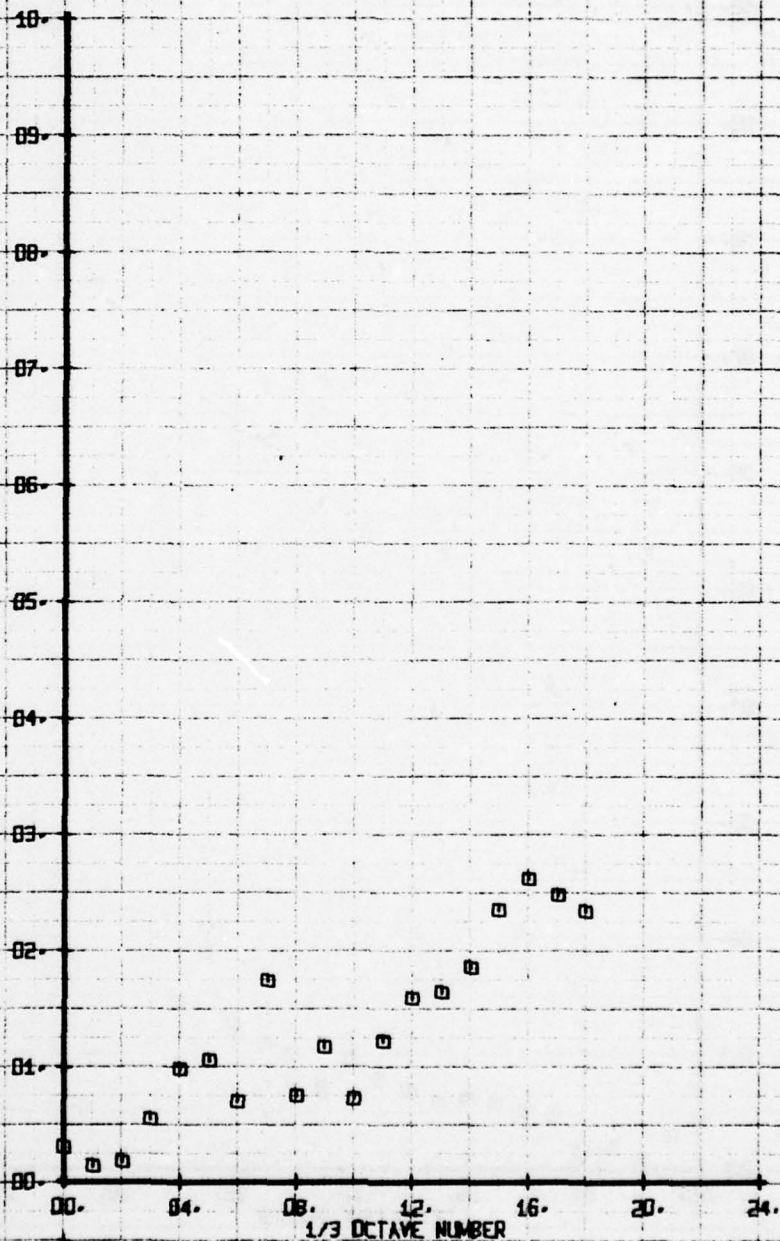
SYM  
Q

CH  
72

## LEGEND

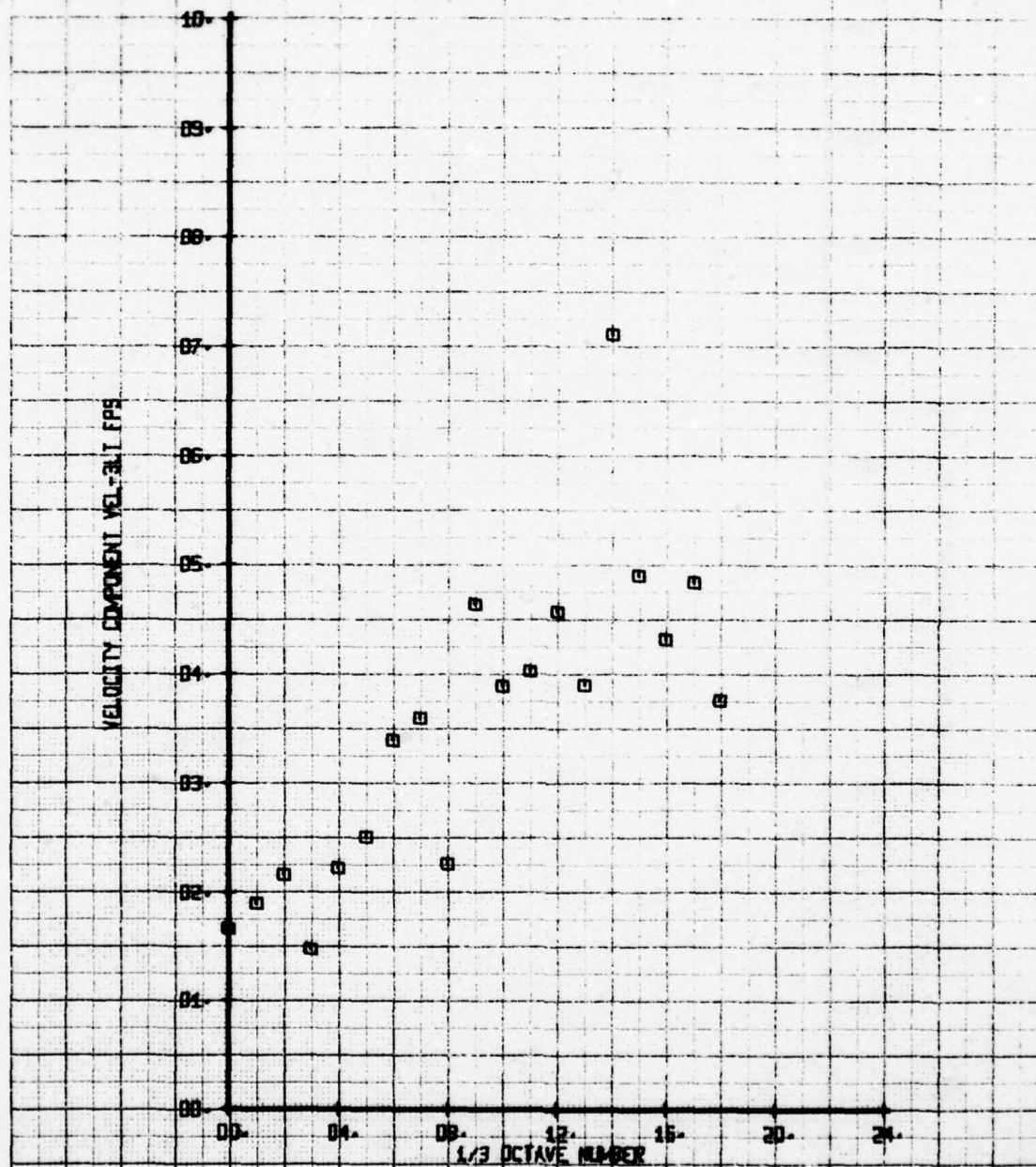
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT.FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/D BODY 160- 2-DGP NB  
 RUN 167 TP 2

SYM	CH	PARAMETER
□	70	VEL-3LT

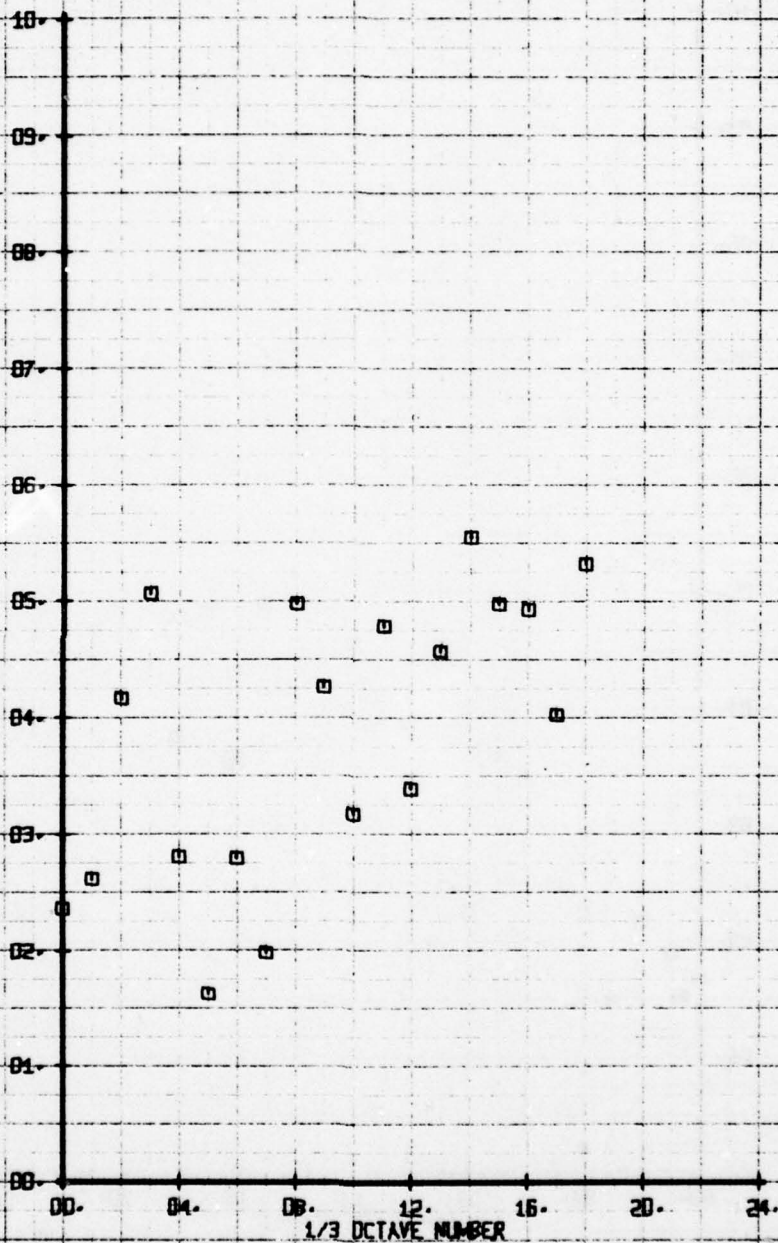




HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O BUOY 160. 2-0GP MB  
 RUN 167 TP 3

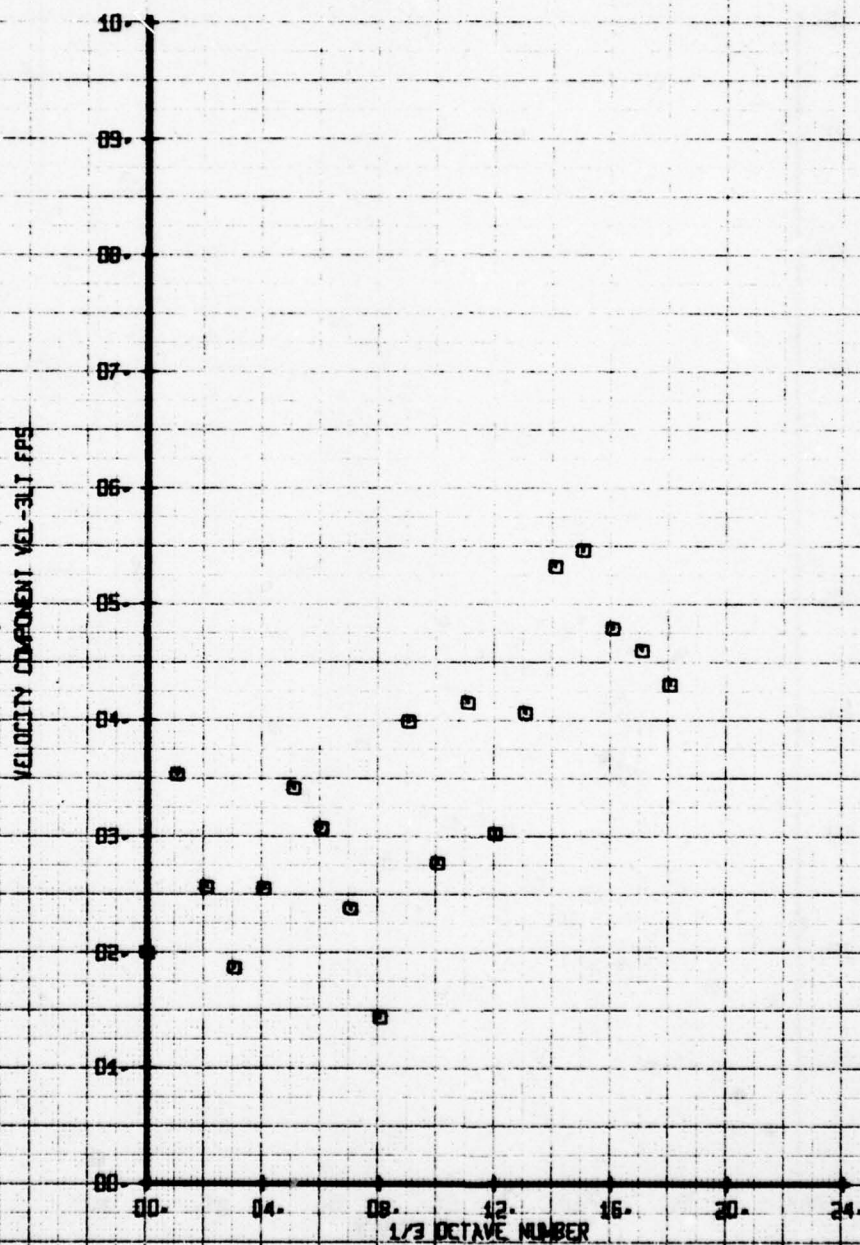
LEGEND  
 CH 70  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/O UBOY 160- 2-0GP. M8  
 RUN 167 TP 4

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT



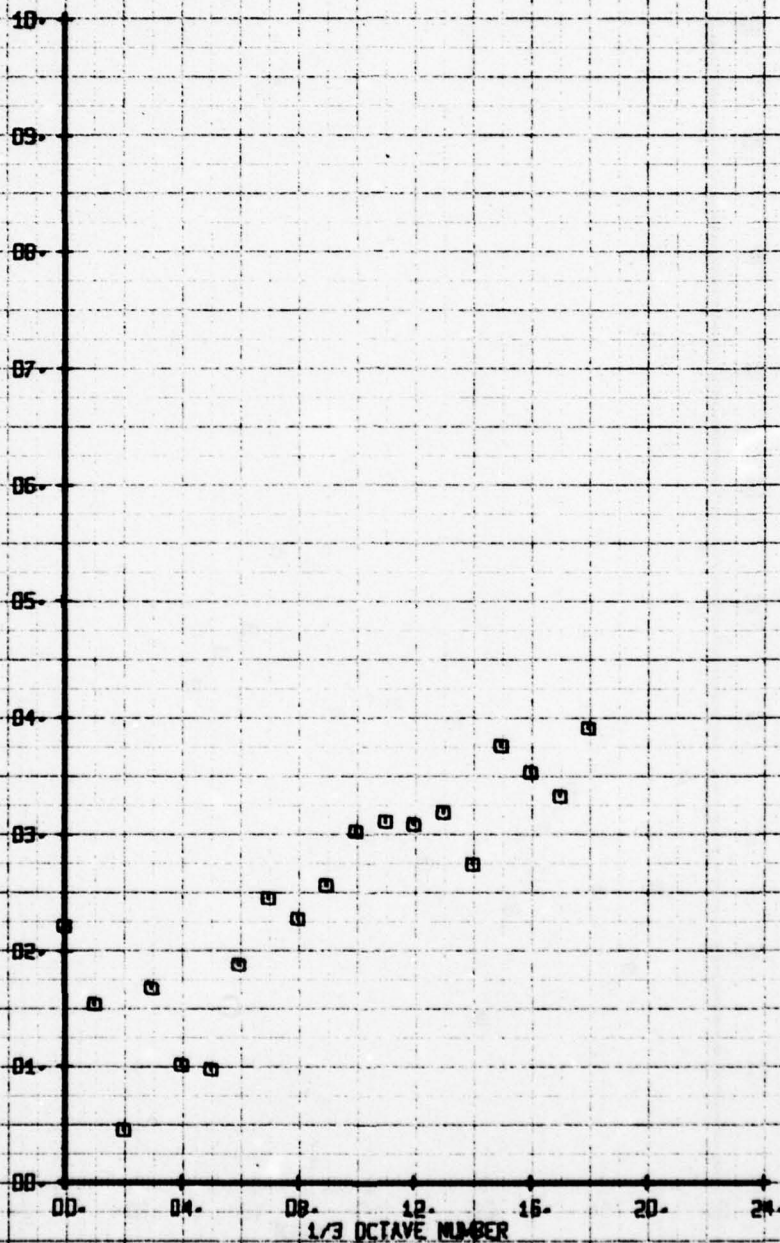
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/D UDDY 160- 2-0GP NR  
 RUN 167 TP 5

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W/D BODY 160. 2-00P NR

RUN 167 TP 6

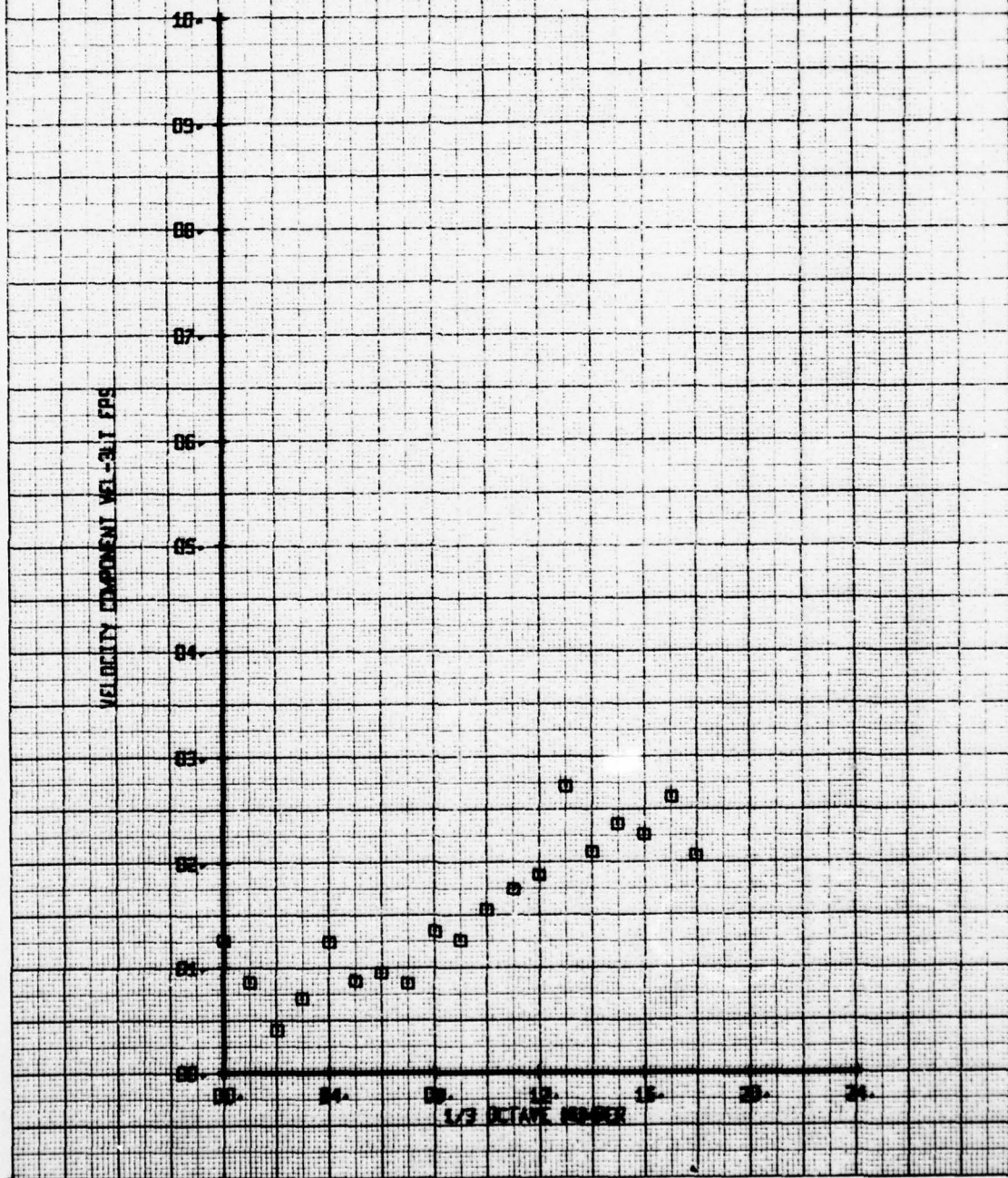
SYM  
O

CH  
70

LEGEND

PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W UBOY 7.60E1

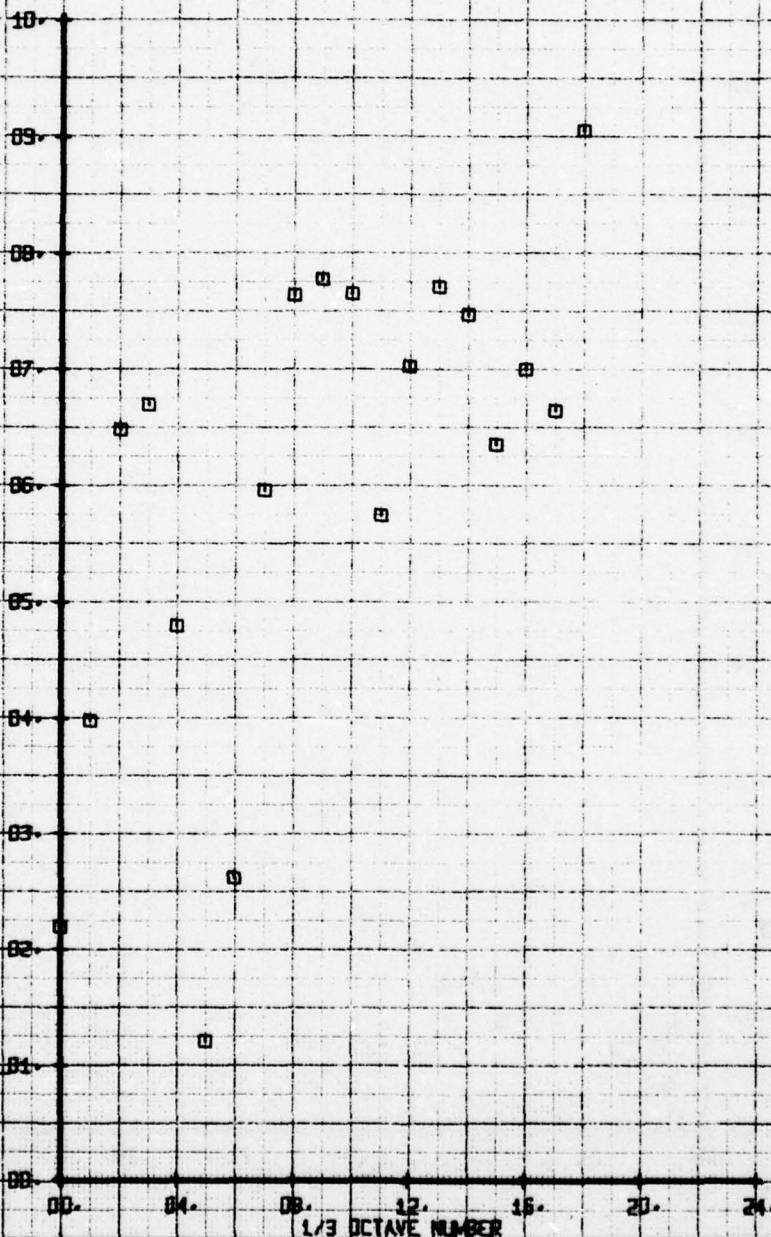
RUN 194 TP 2

SYM  
□

LEGEND

CH 71  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W 180Y 7-60.1-25G.E1

RUN 194 TP 3

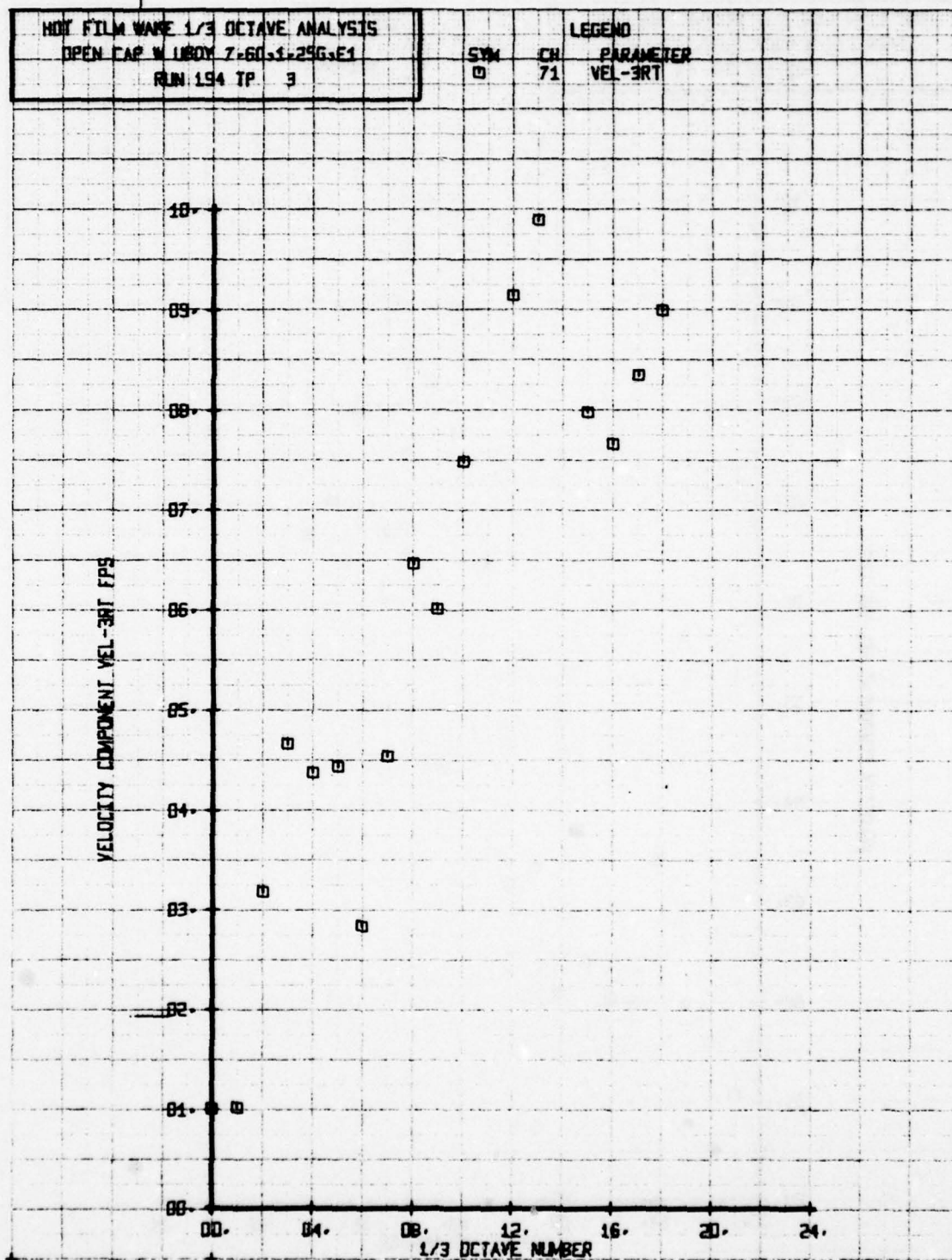
SYM  
□

LEGEND

CH  
71

PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

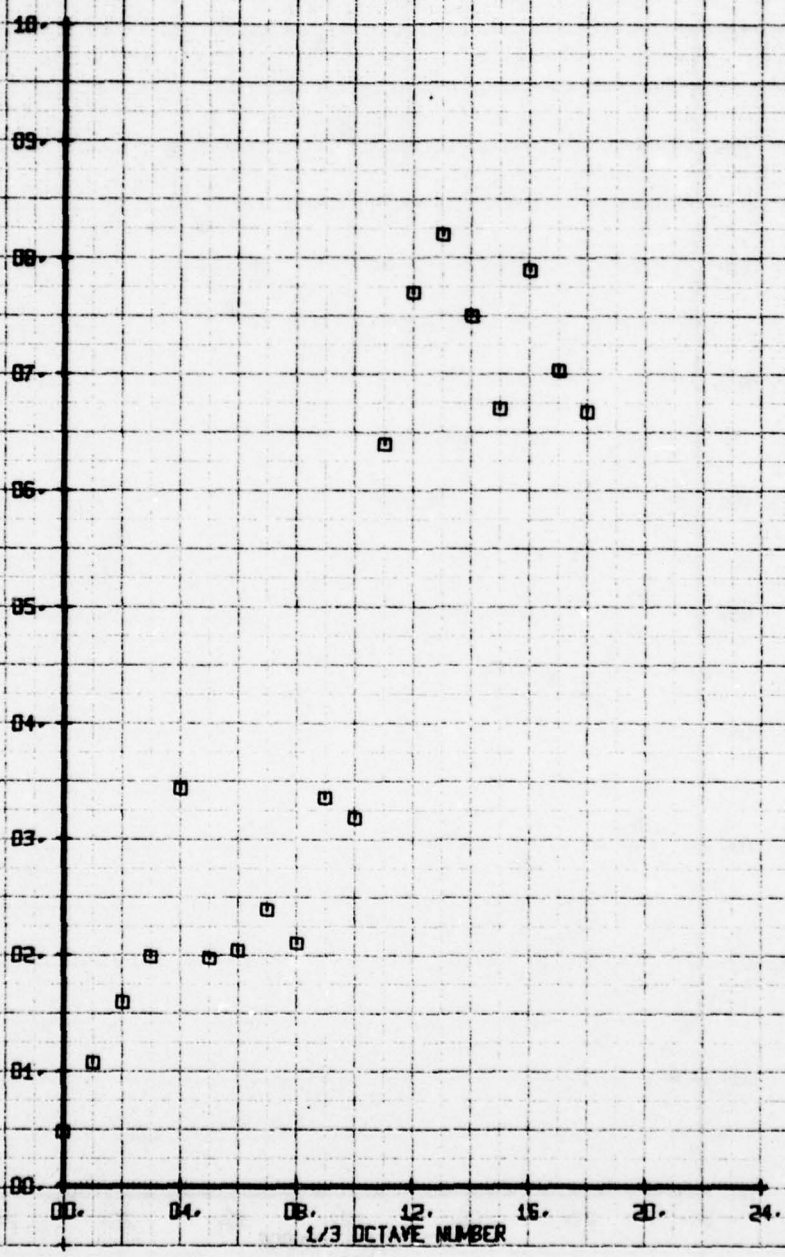




NOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 7.60, 1.25G, F1  
 RUN 154 TP 4

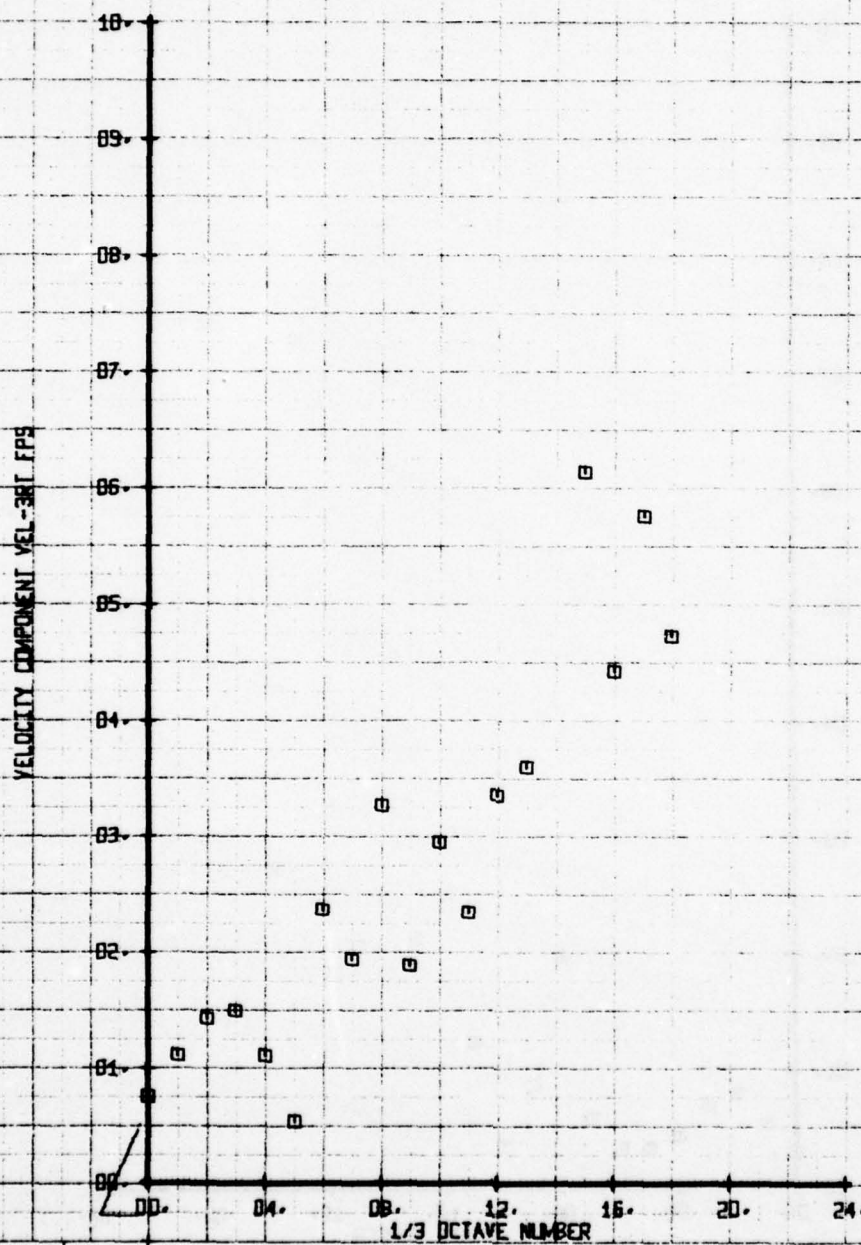
LEGEND  
 CH 71  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 7.60, 1.25G, E1  
 RUN 194 TP 5

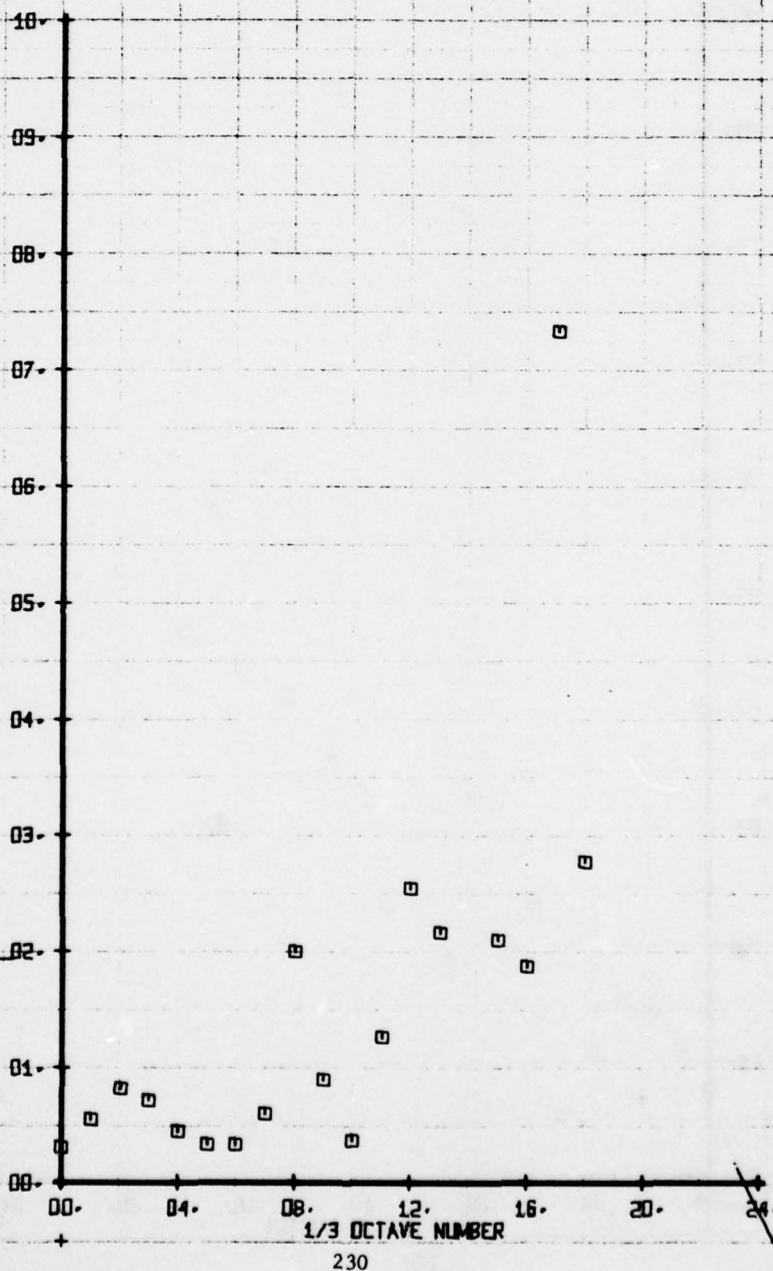
SYM	CH	PARAMETER
□	71	VEL-3RT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LIBDY 7.60.1.25G.E1  
RUN 194 TP 6

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT

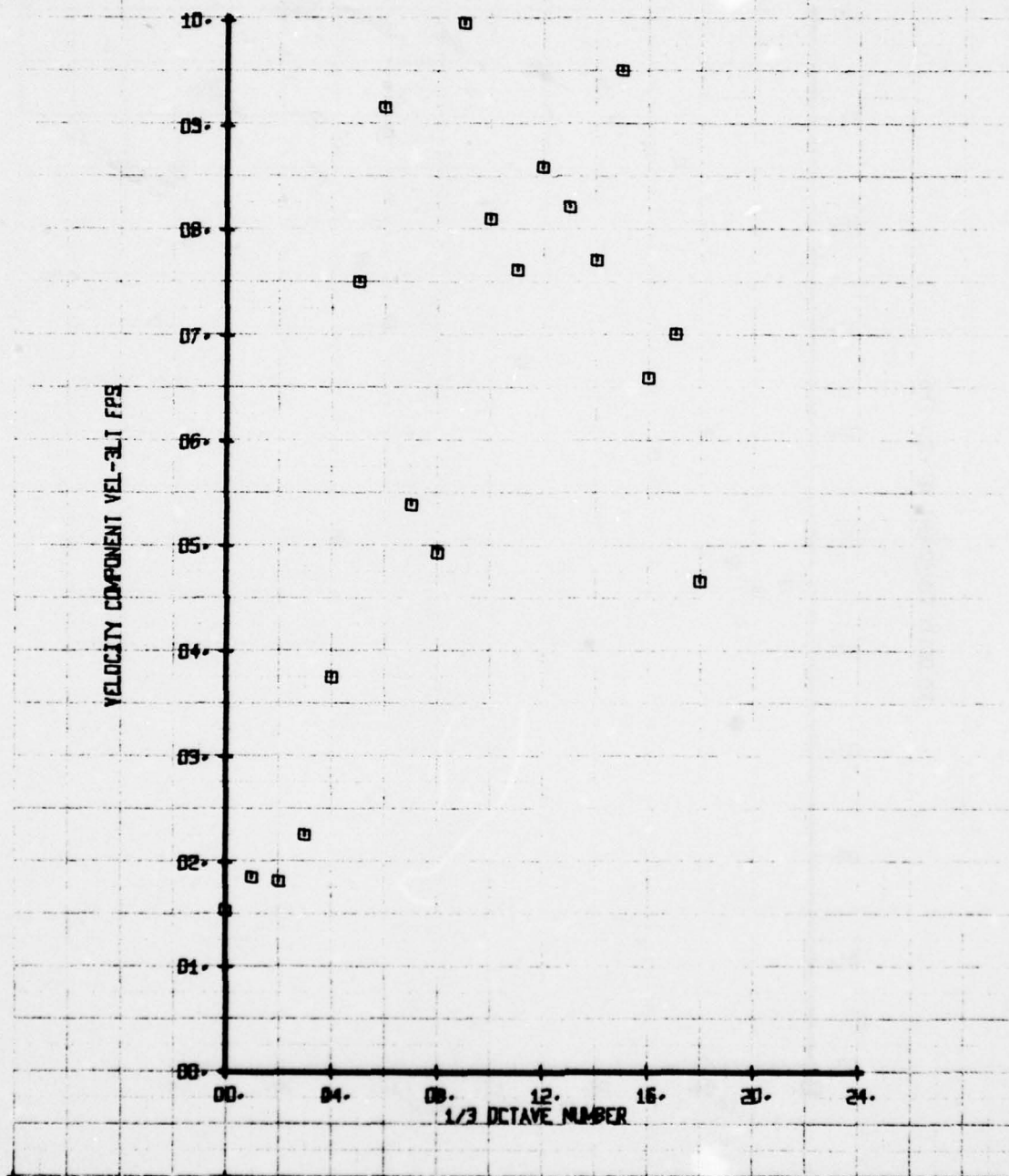
VELOCITY COMPONENT VEL-3RT FPS

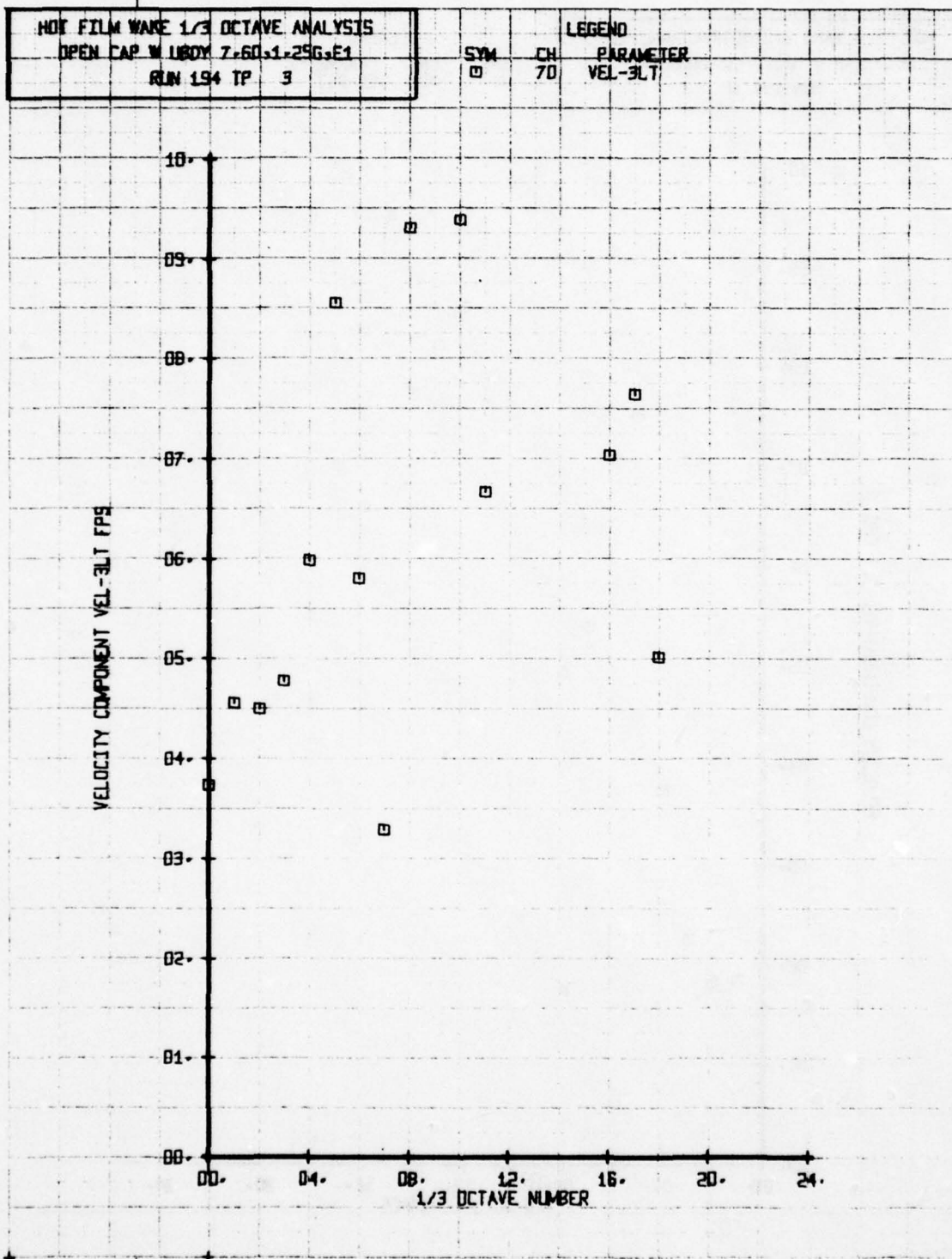




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UB0Y 7-60-1-25G-E1  
 RUN 194 TP 2

LEGEND  
 CH 70  
 PARAMETER  
 VEL-3LT





# HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W UBDY 7.60, 1.25G, E1

RUN 194 TP 4

SYM

□

CH

70

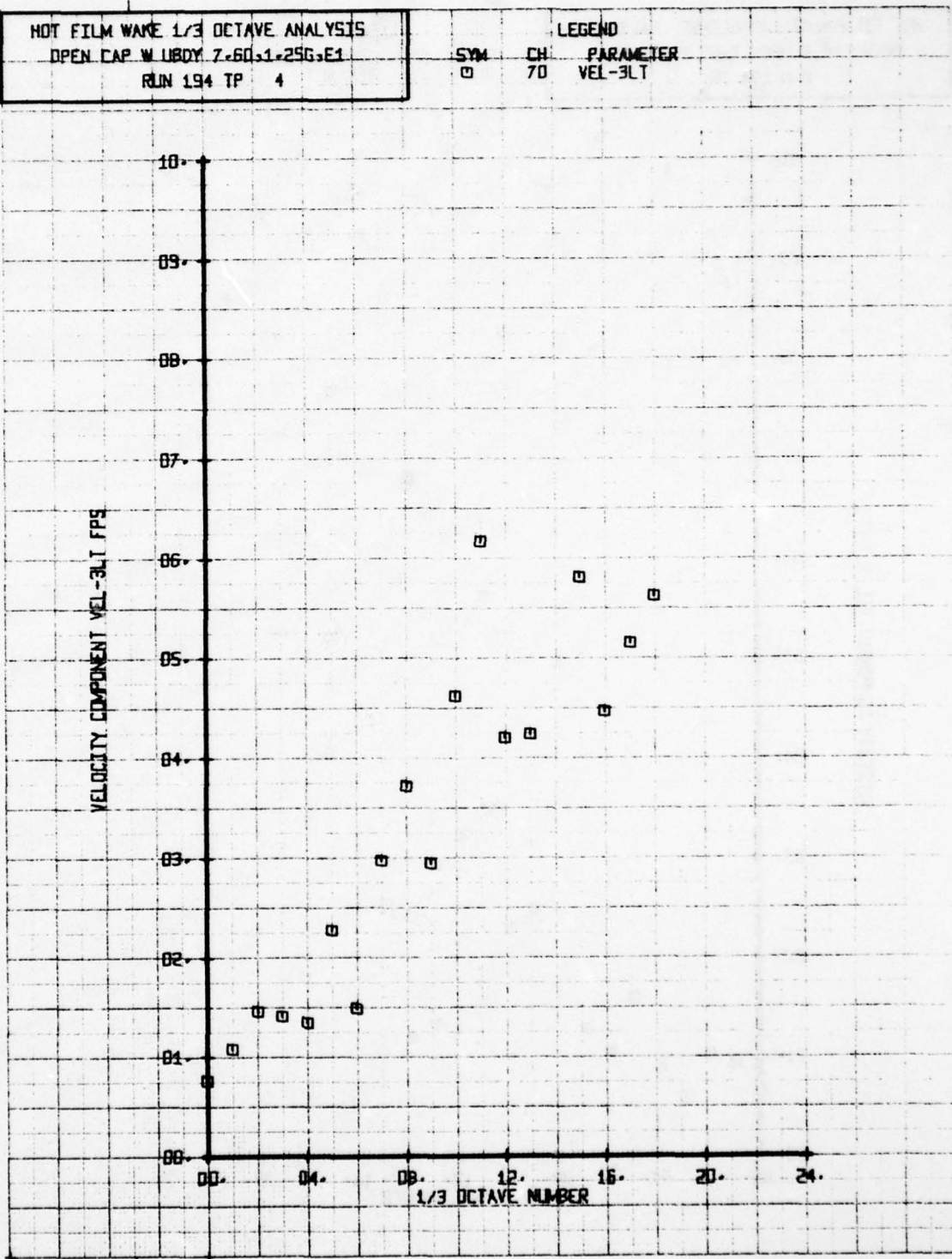
## LEGEND

PARAMETER

VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

1/3 OCTAVE NUMBER





HOT FILM WAKE 1/3 OCTAVE ANALYSIS

OPEN CAP W 1180Y 7-60, 1-25G, E1

RUN 194 TP 5

SYM

□

CH

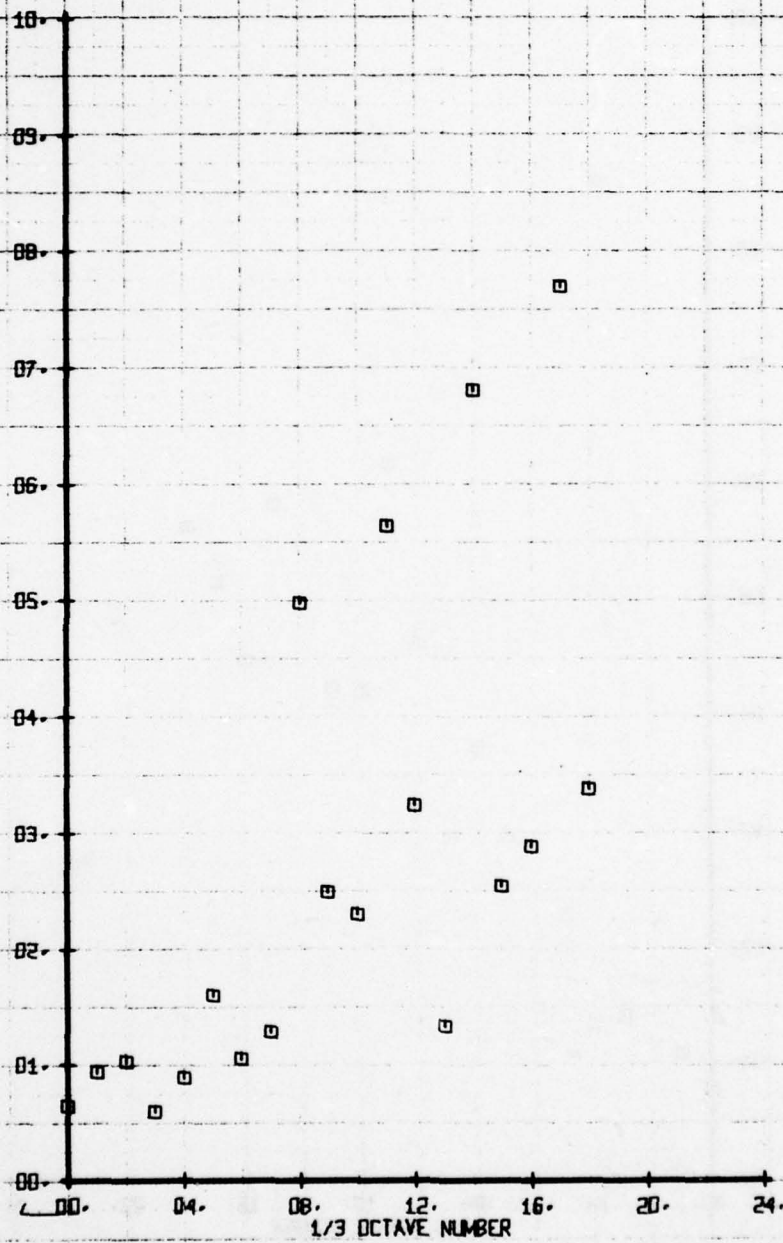
70

LEGEND

PARAMETER

VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

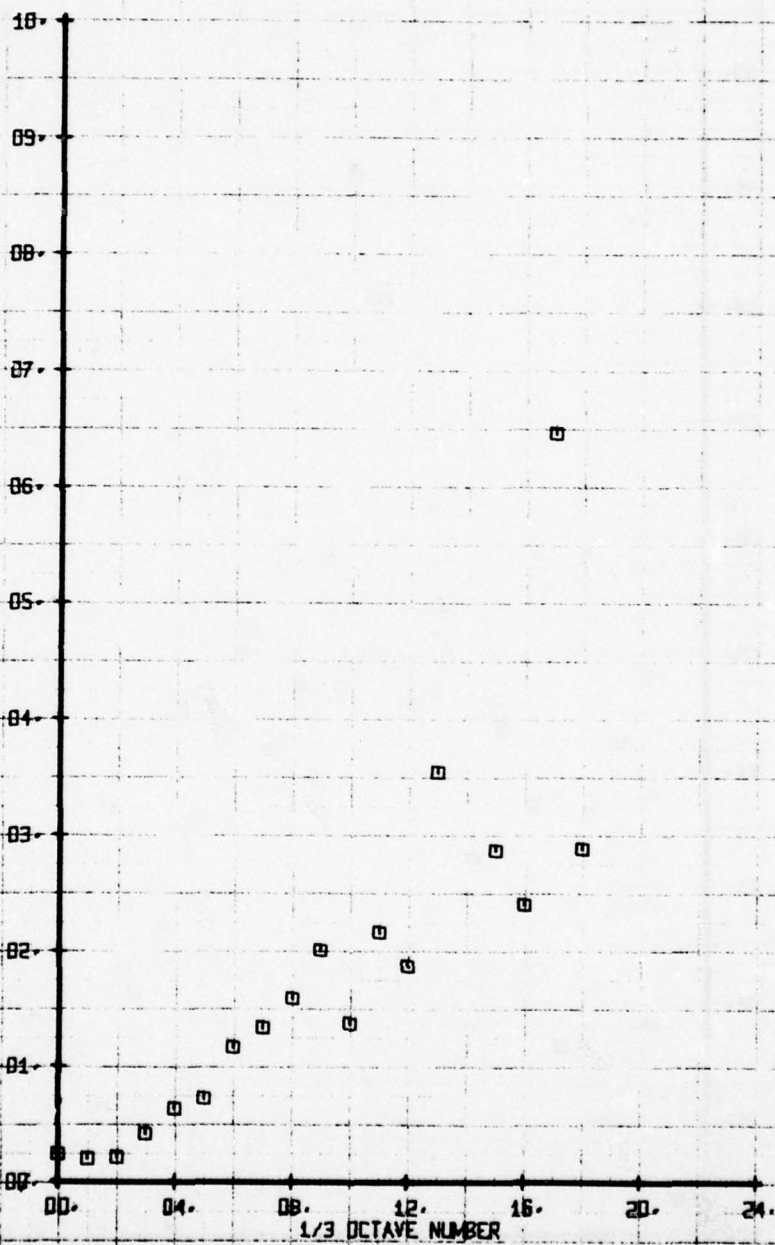
OPEN CAP W BODY 7-60, 1-29G, F1

RUN 194 TP 6

LEGEND

SYM	CH.	PARAMETER
□	70	VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

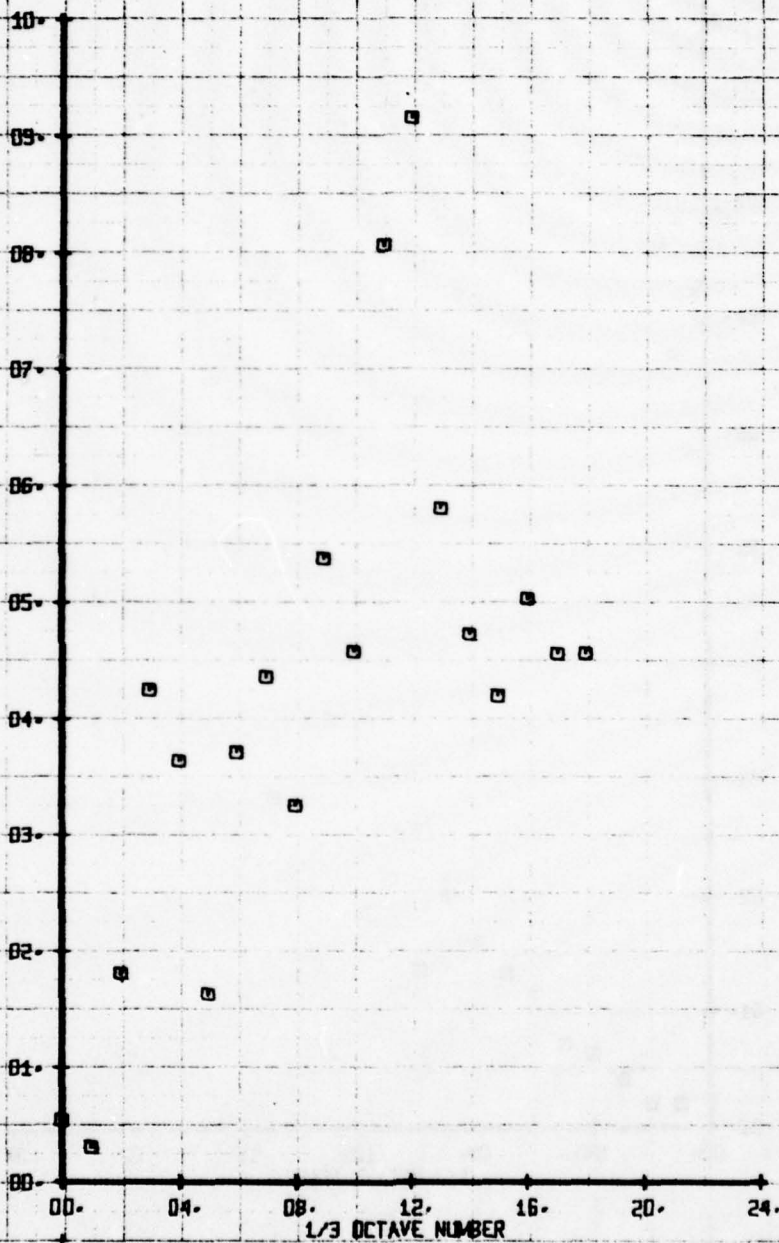


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10.40.1.25G NO BLOS  
 RUN 161 TP 2

SYM  
 □

LEGEND  
 CH 71  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBODY 10.40x1.256 NO BLOS  
 RUN 161 TP 4

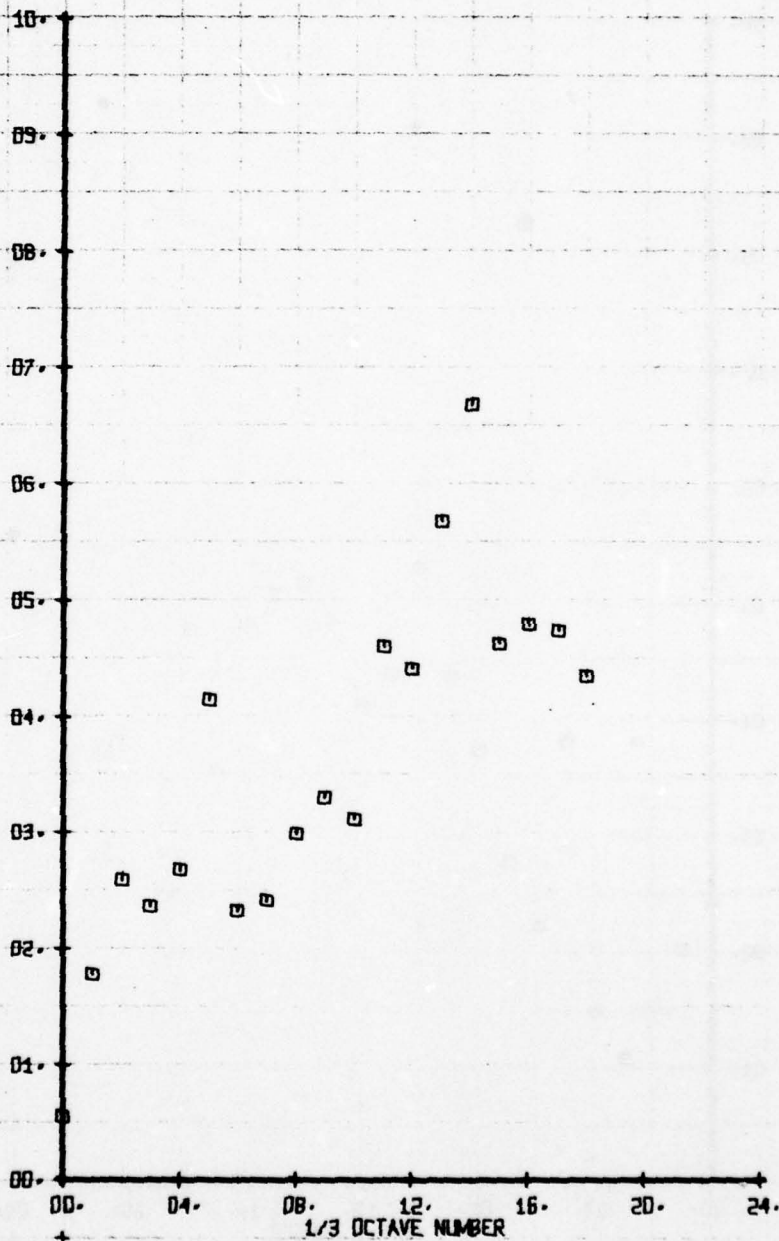
SYM  
 □

CH  
 71

LEGEND

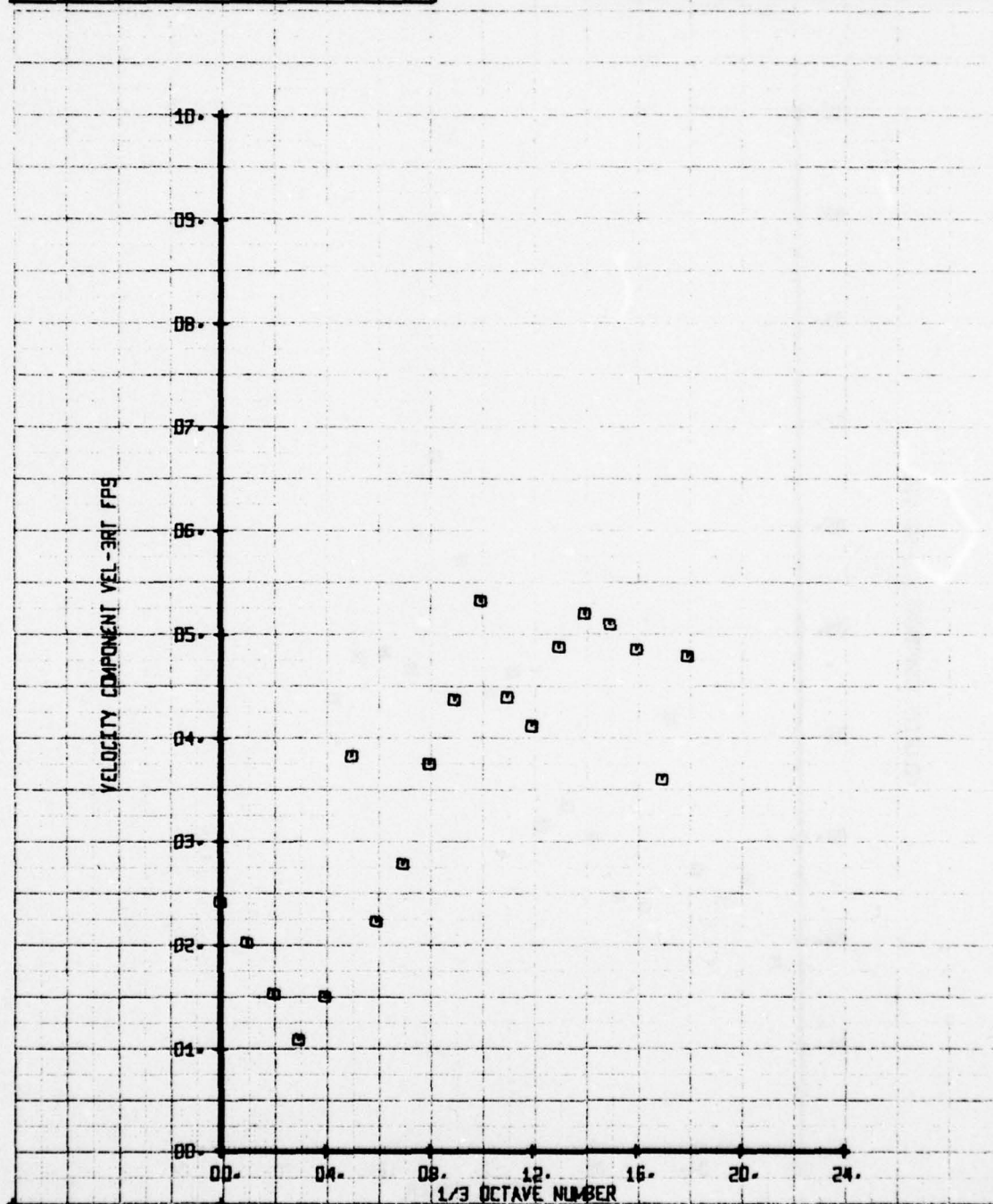
PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



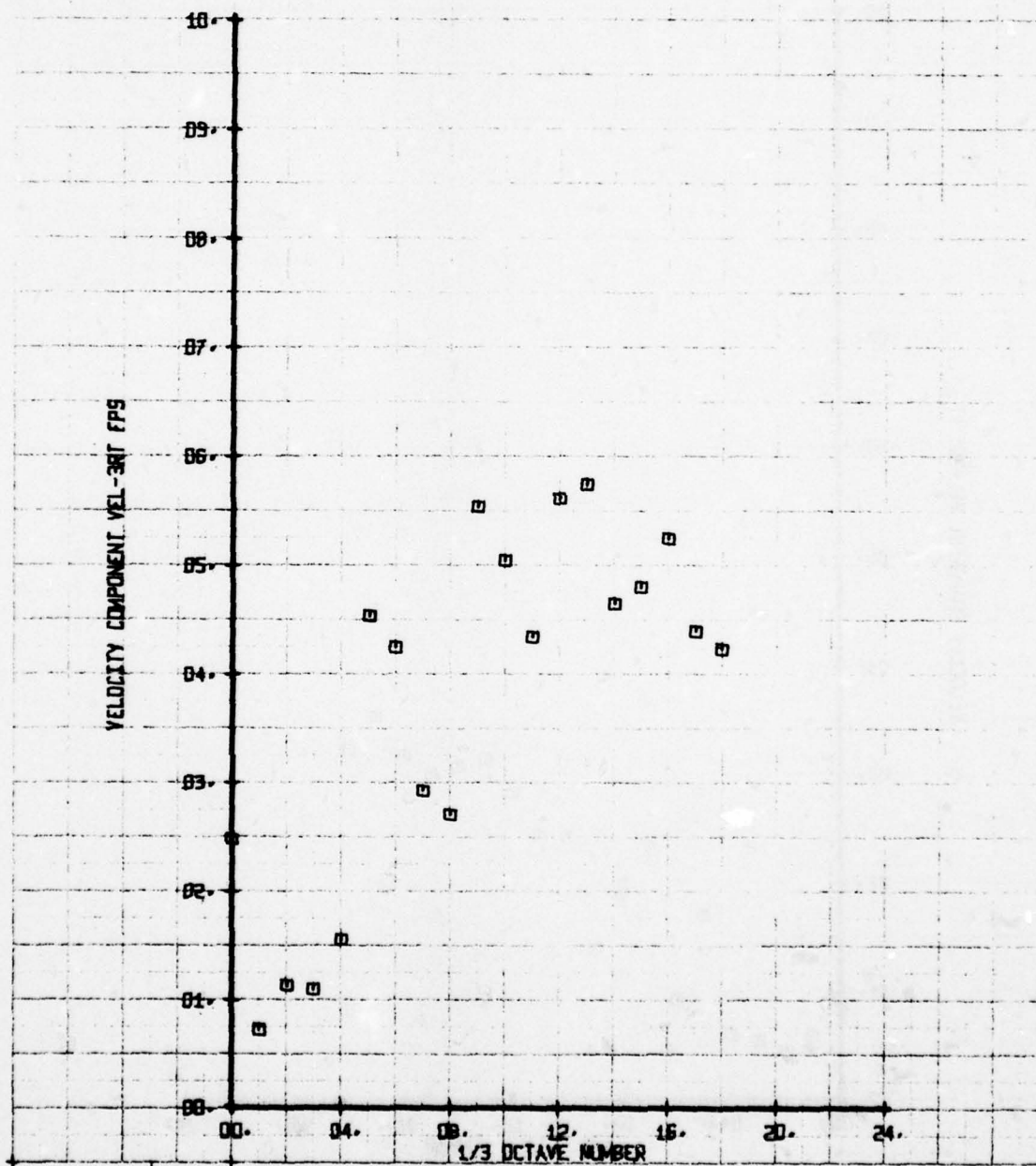
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBDY 10.40.1.25G NO BLOS  
 RUN 161 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY LD-40, 1-25G NO BLOS  
 RUN 161 TP 5

LEGEND  
 CH 71  
 PARAMETER  
 VEL-3RT





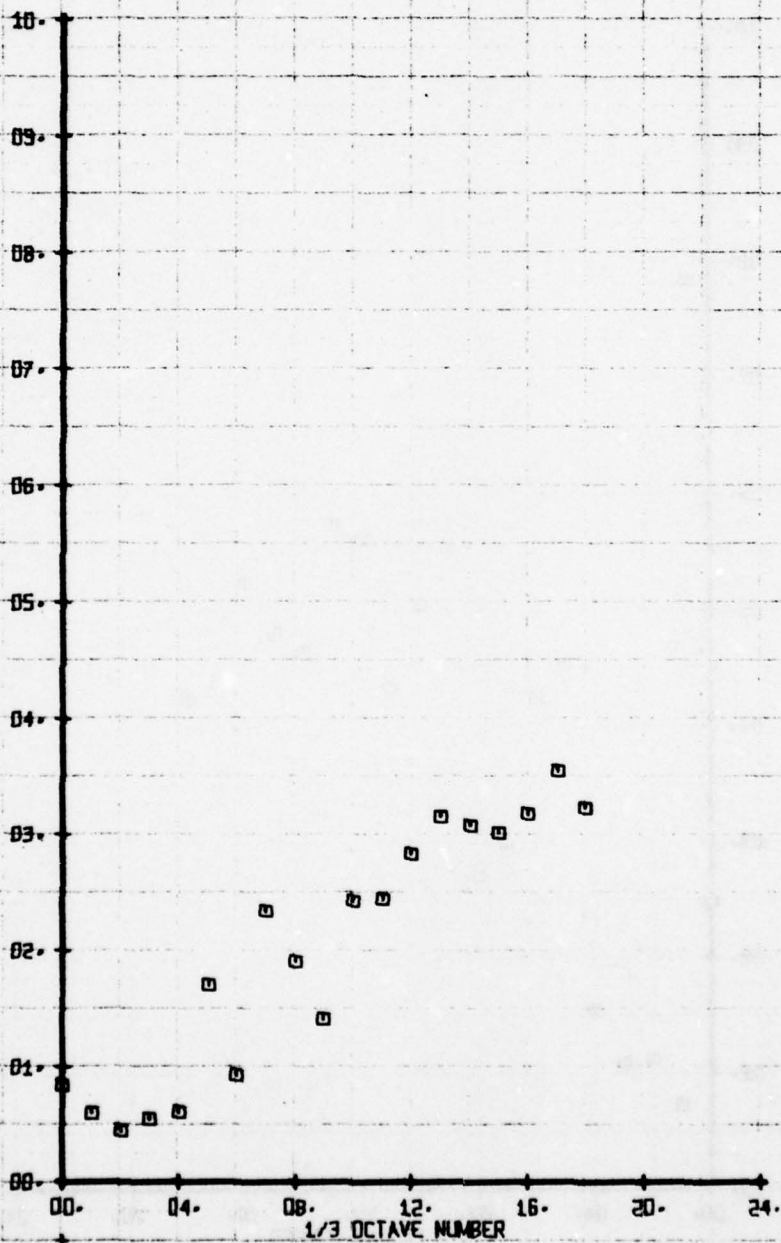
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBDY 10.4041.256 NO BLOS  
RUN 161 TP 6

SYM  
□

CH  
71

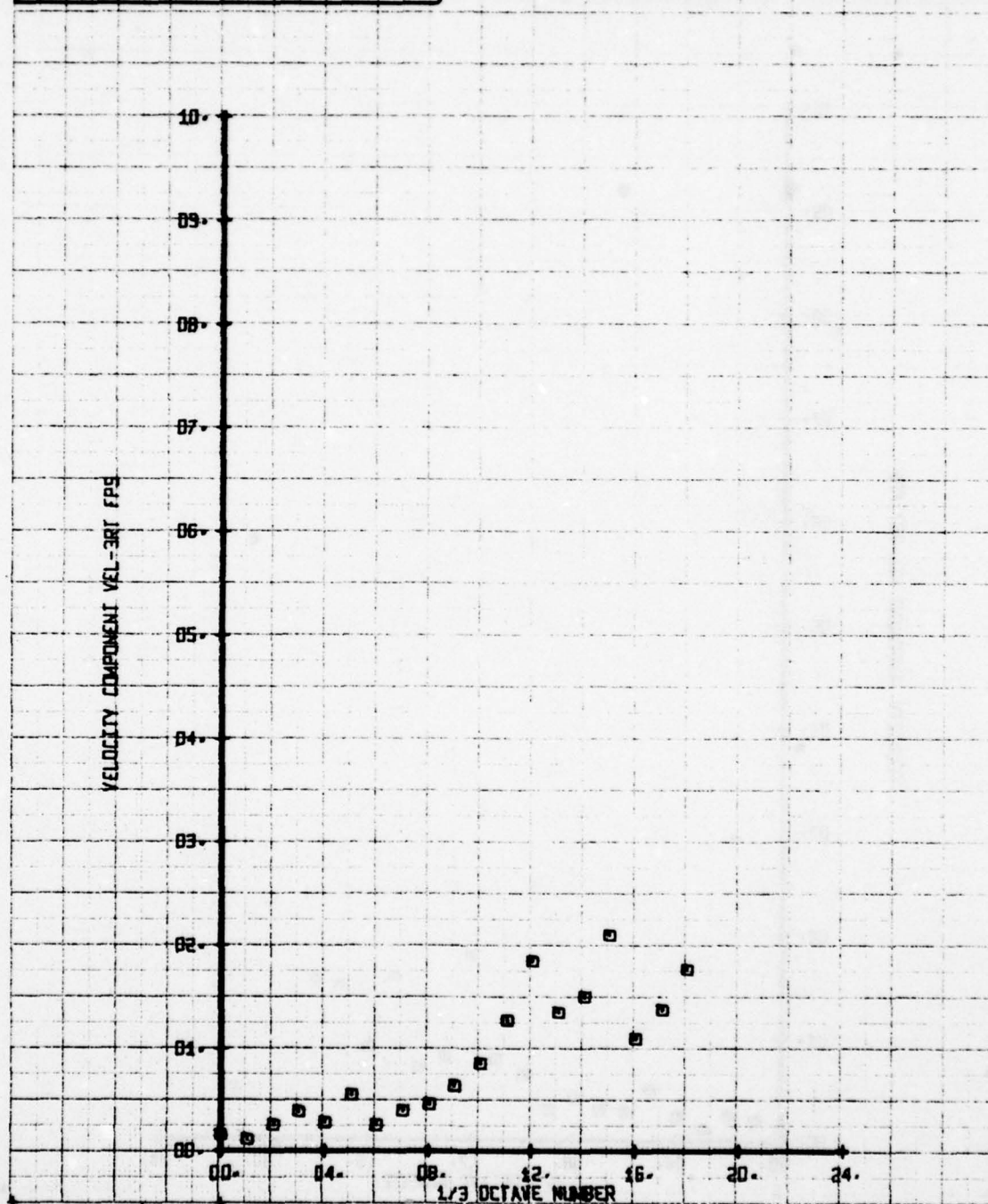
LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W UB0Y 10-40, 1-256 NO. 8LOS  
RUN 181 TP 7

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT

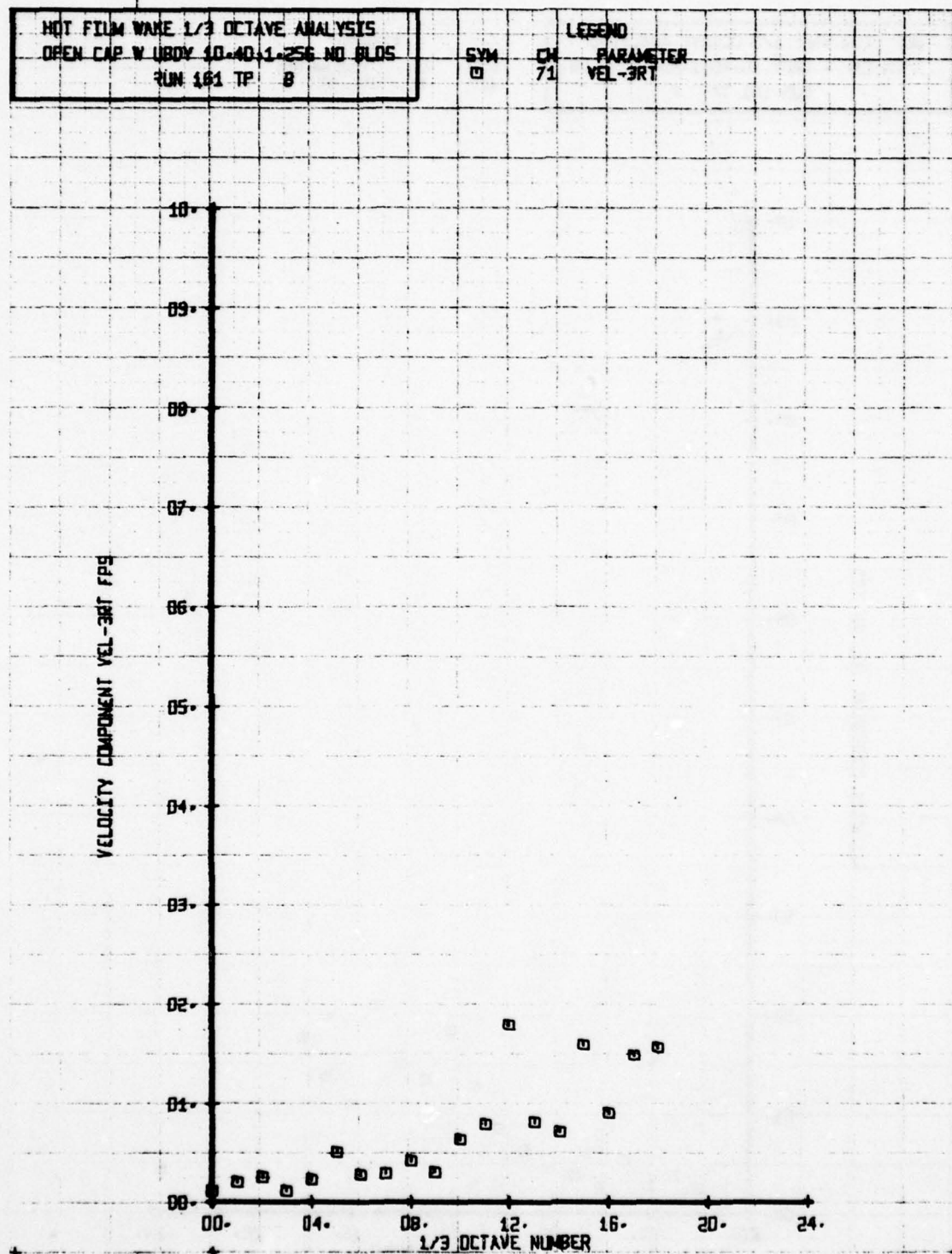


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UROY 10-40-1-256 NO BLOS  
 RUN 161 TP 8

SYM  
 □

CH  
 71

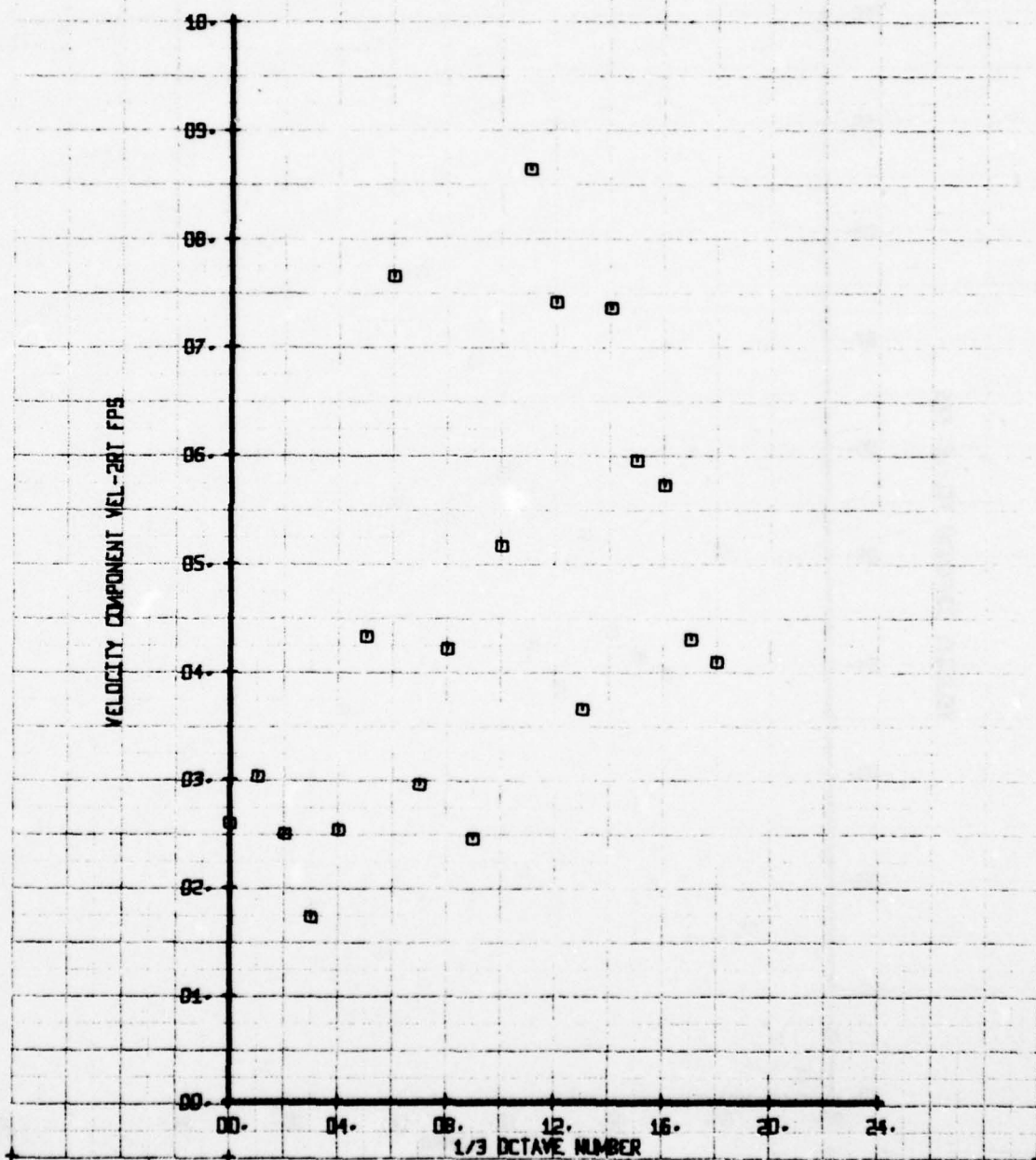
LEGEND  
 PARAMETER  
 VEL-3RT





HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LEROY 10-40, 1-25G NO 8LOS  
 RUN 161 TP 2

LEGEND  
 CH 75  
 PARAMETER  
 VEL-2RT



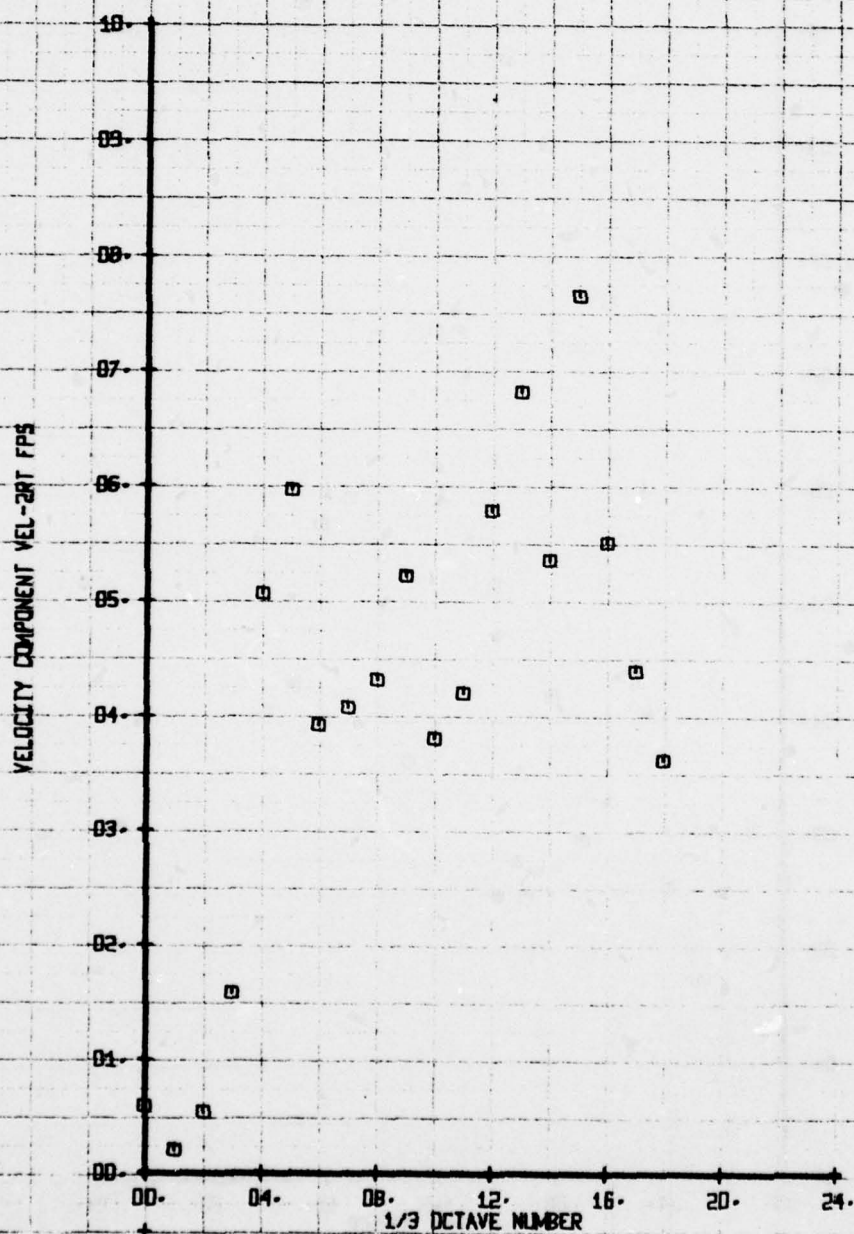
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBOY 10-40, 1-25G NO BLOS  
RUN 161 TP 3

SYM  
□

LEGEND

CH  
75

PARAMETER  
VEL-2RT

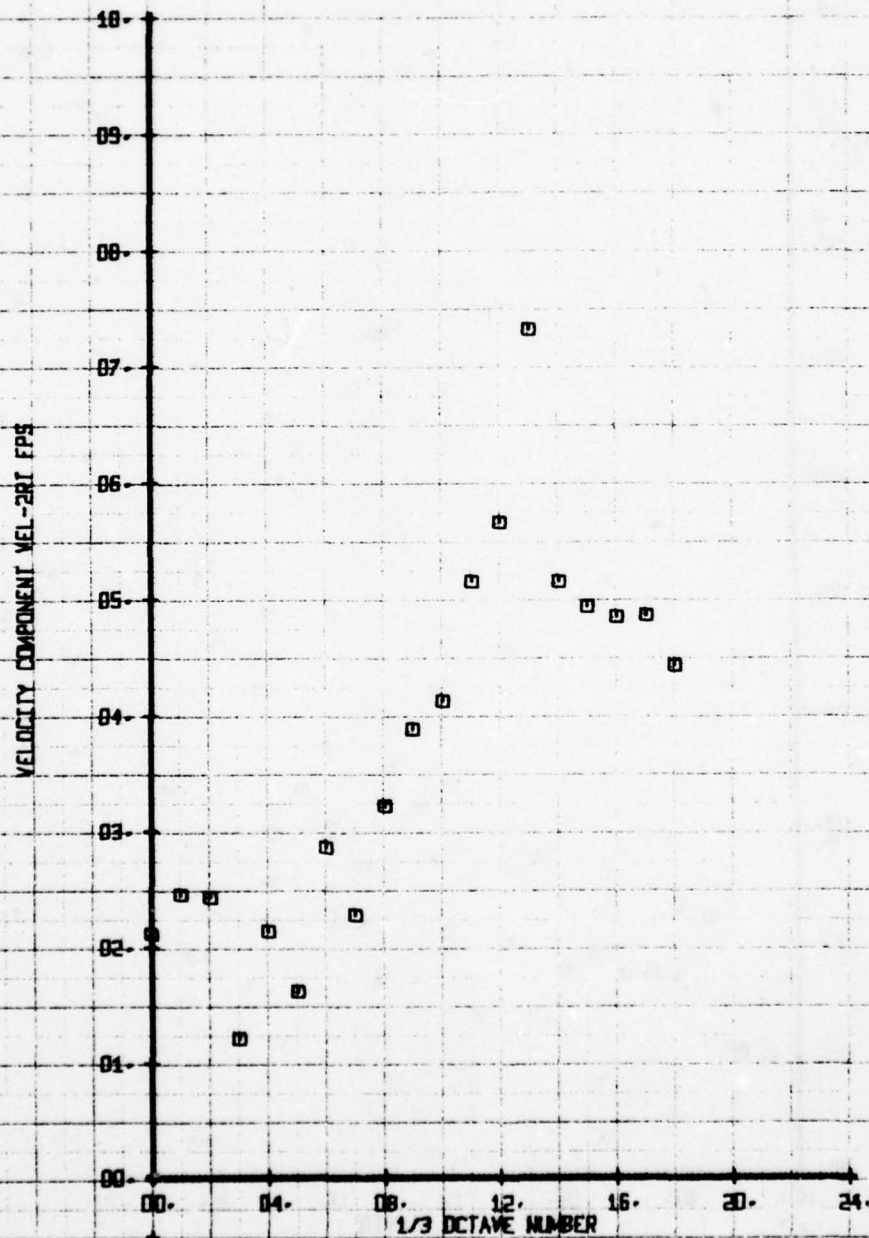


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBDY 10-40-1-25G NO BLOS  
RUN 161 TP 4

SYM  
□

LEGEND

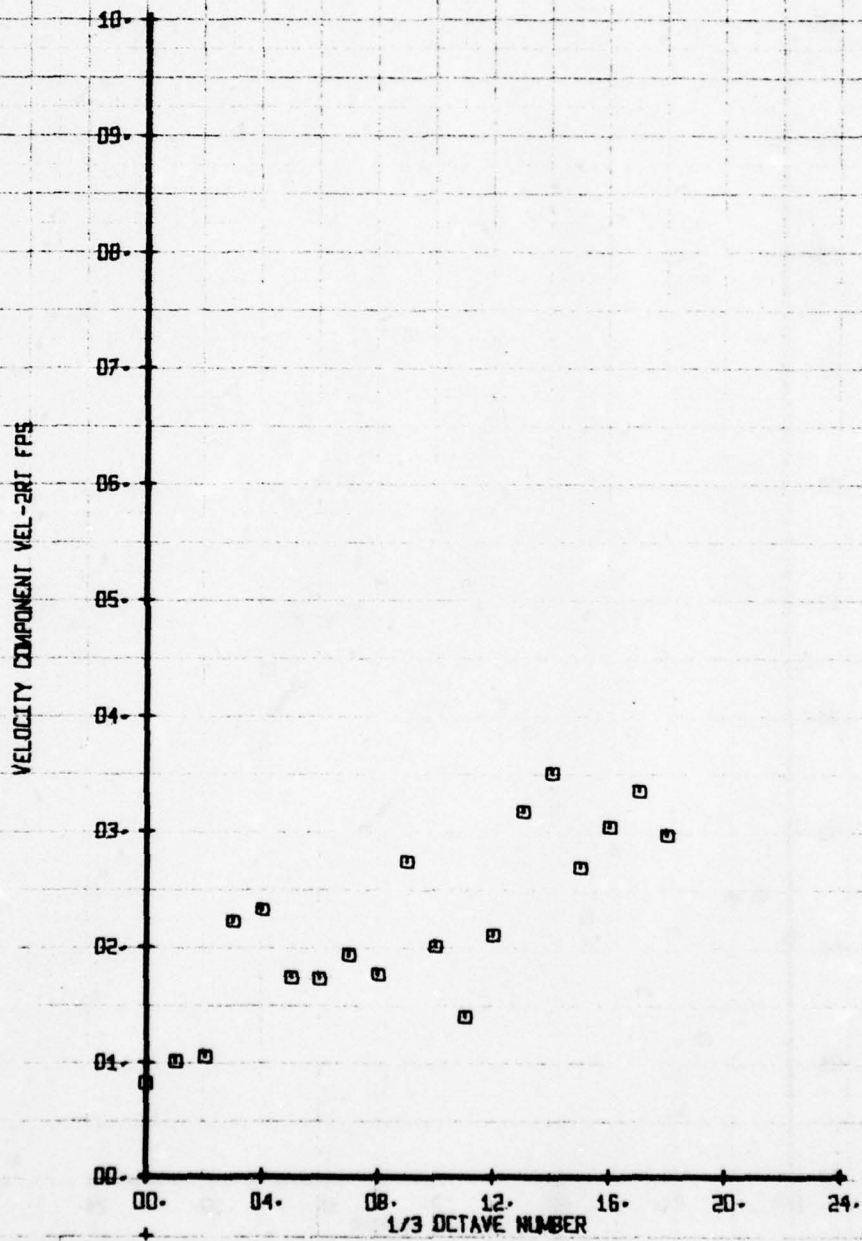
CH 75  
PARAMETER  
VEL-2RT





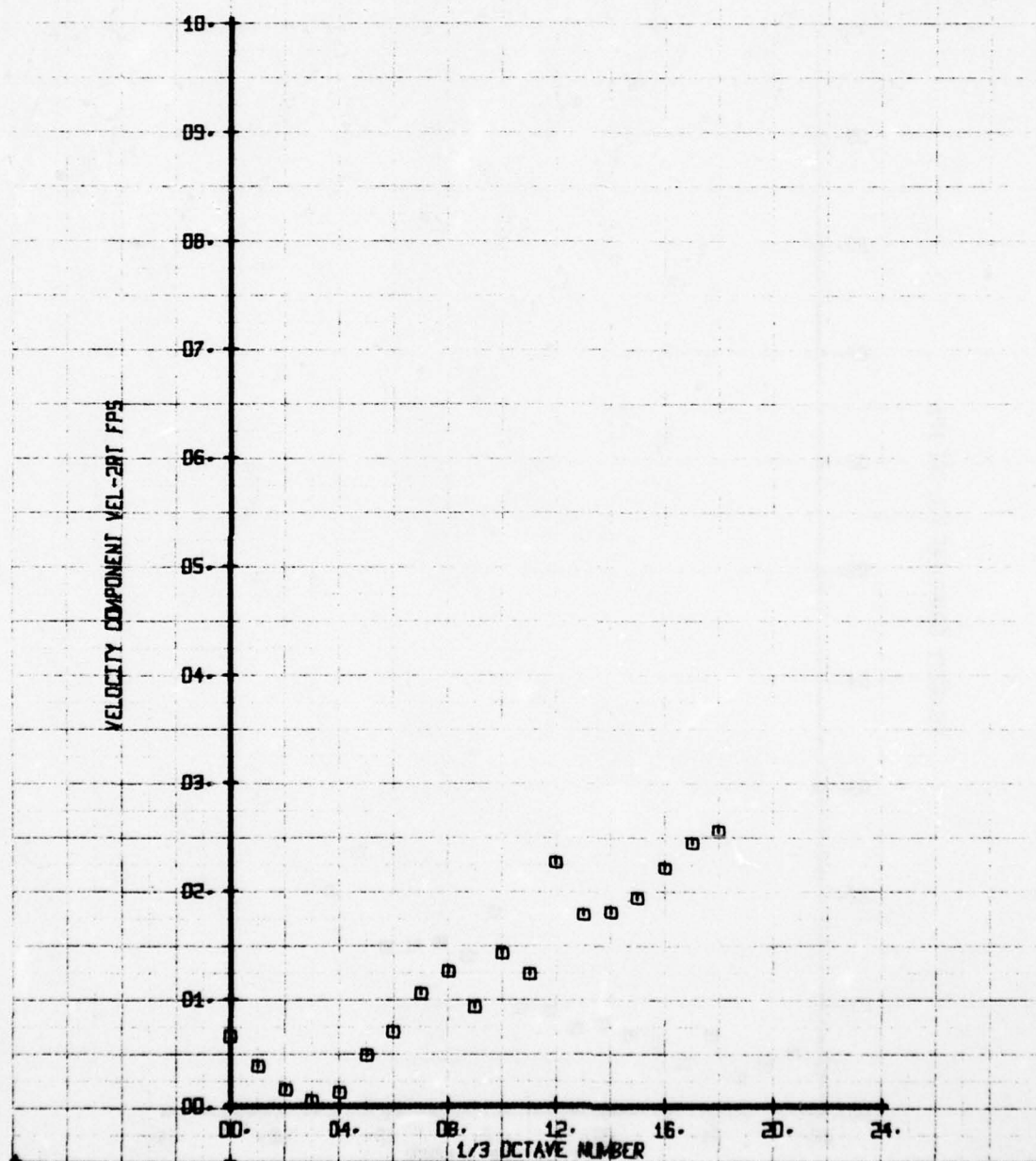
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W 180Y 10.40.1.25G NO 0105  
 RUN 181 TP 5

SYM	CH	PARAMETER
0	75	VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LIBDY 10-40-1-25G NO BLOS  
RUN 181 TP 6

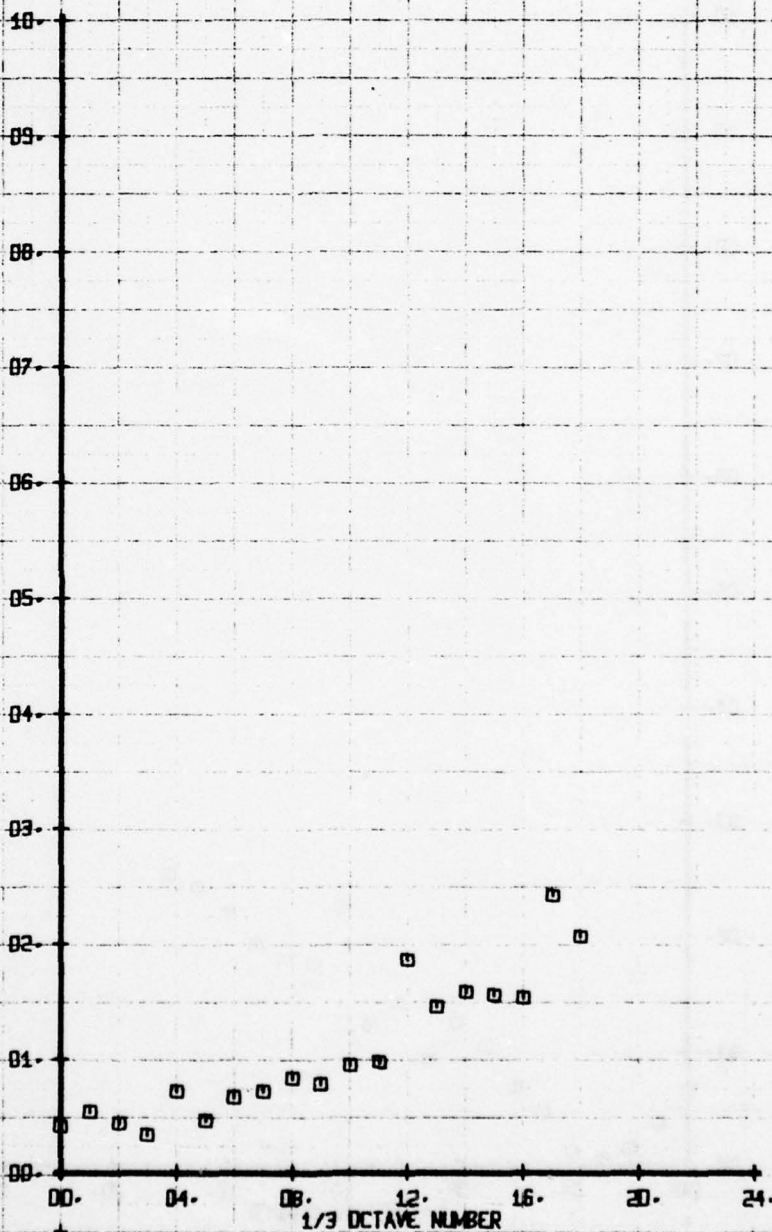
LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LIBBY 10-40-1-25G NO BLOS  
 RUN 161 TP 7

SYM	CH	PARAMETER
□	75	VEL-2RT

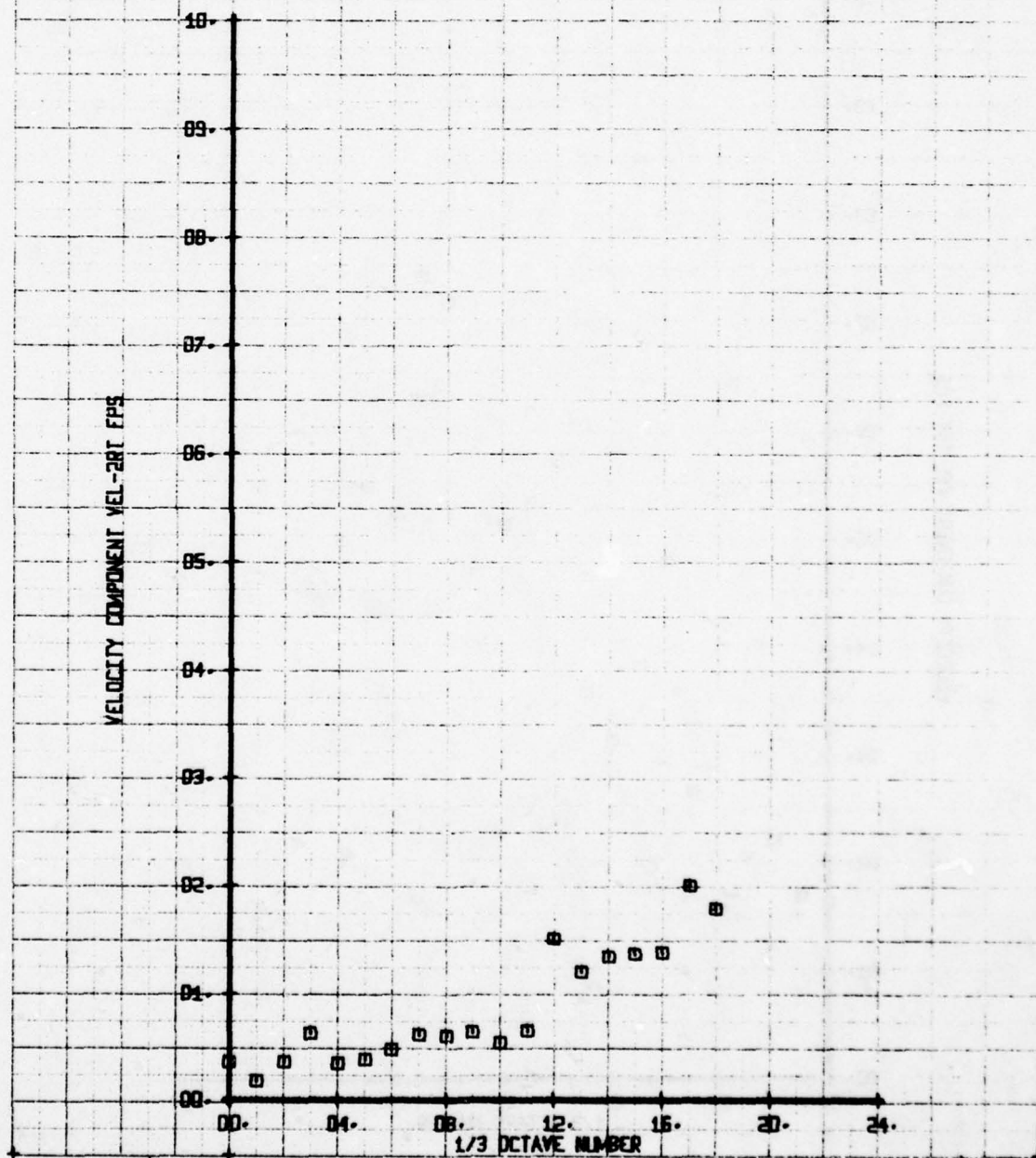
VELOCITY COMPONENT VEL-2RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LIDY 10-40-1-256 NO BLOS  
RUN 161 TP 8

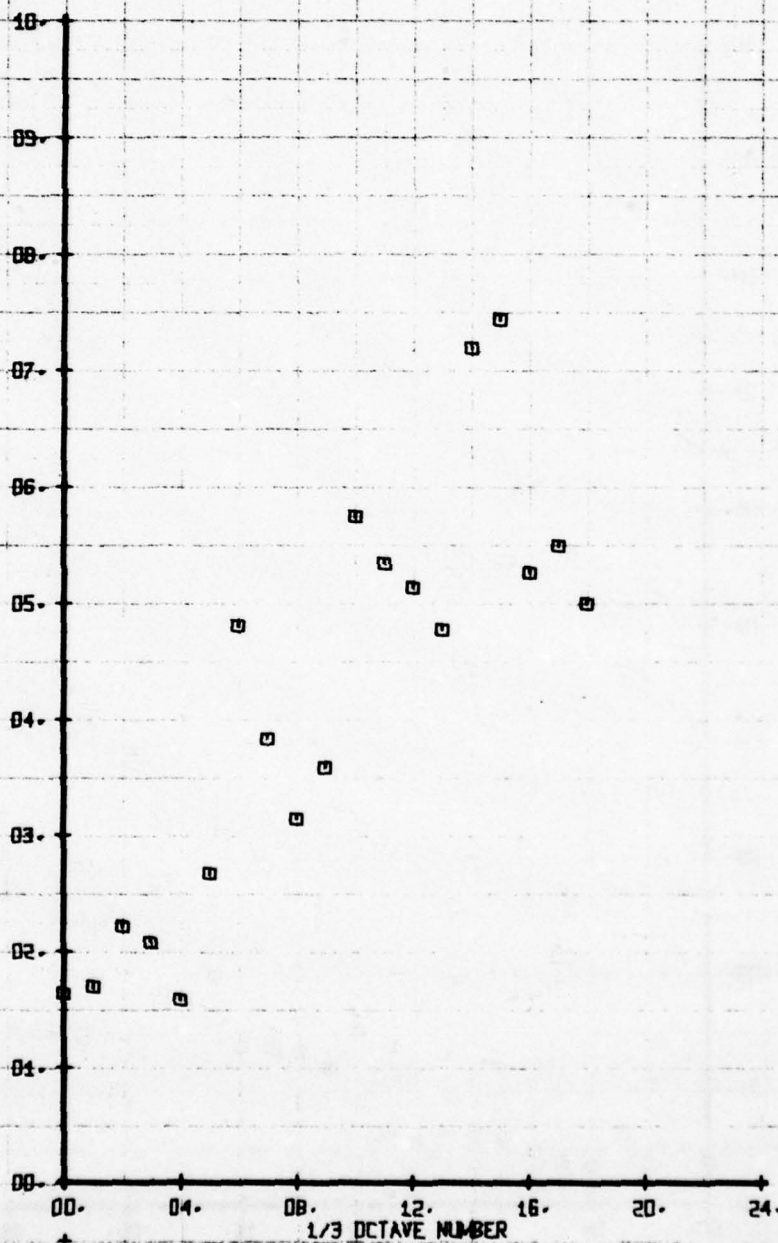
LEGEND	
SYM	CH
□	75
	PARAMETER
	VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W BODY 10-40, 1.25G NO BLOS  
RUN 161 TP 2

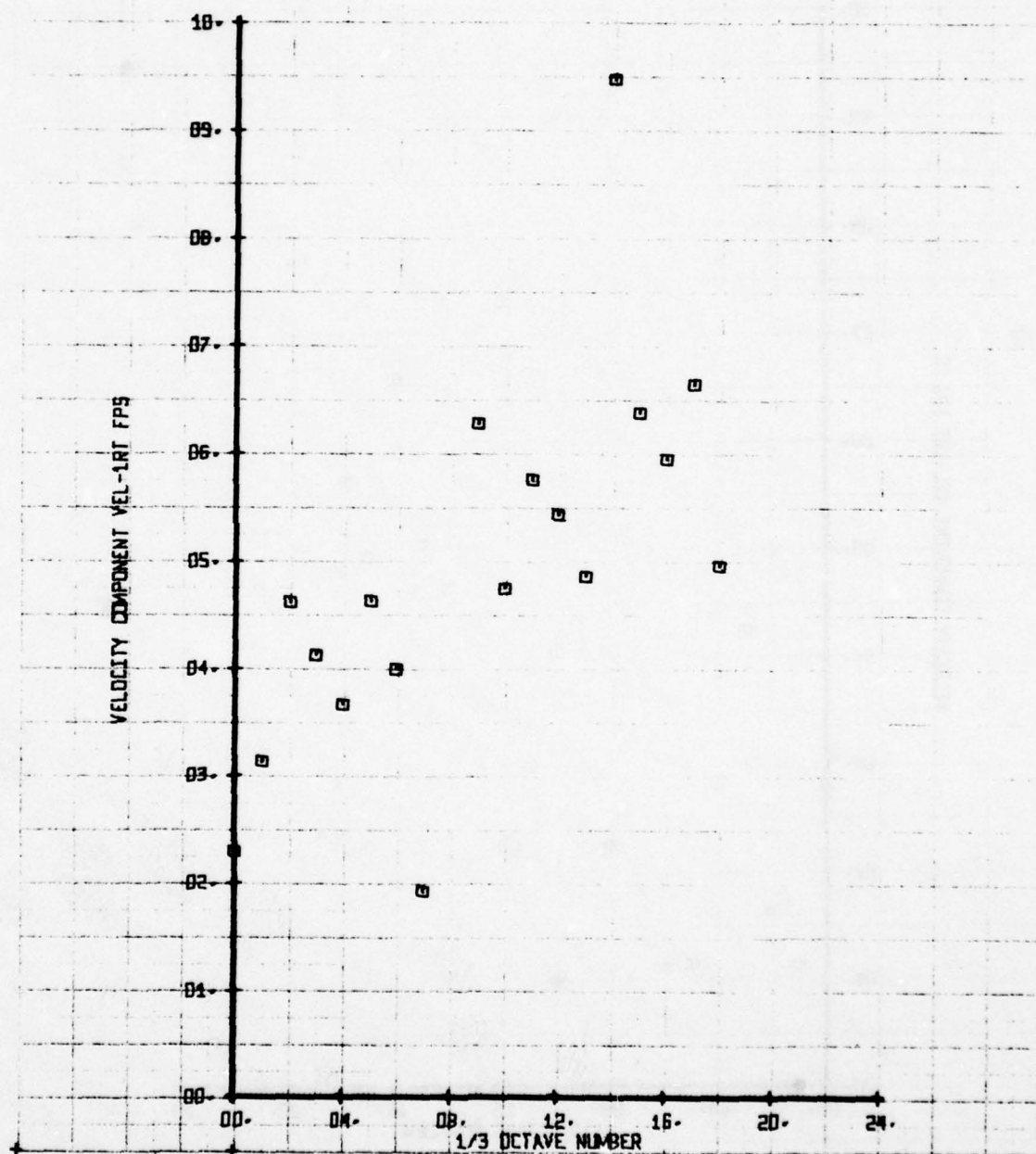
SYM CH PARAMETER  
□ 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W BODY 10-40.1-25G NO BLOS  
 RUN 161 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 74 VEL-1RT

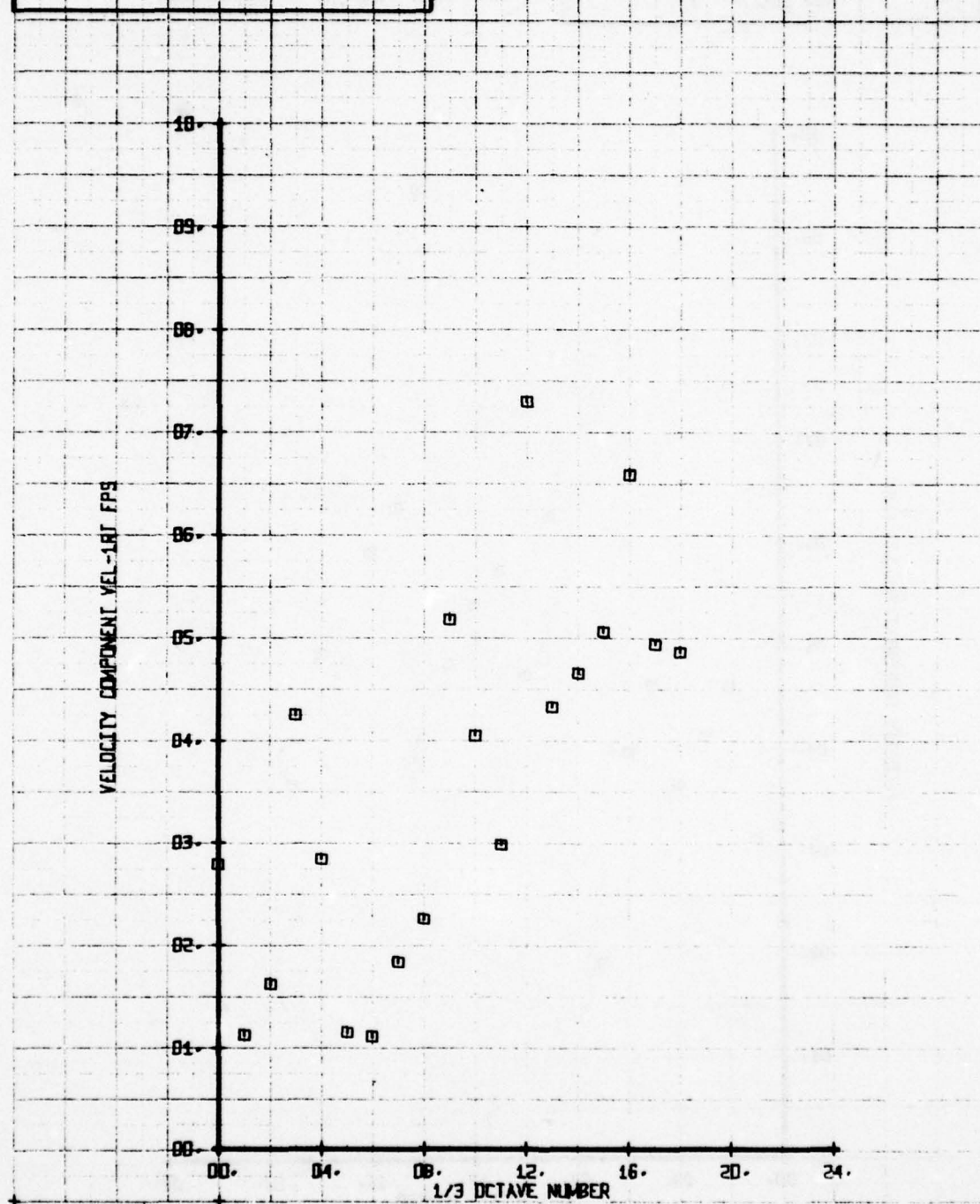




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/ BODY 10-40-1-250 NO BLDS  
 RUN 181 TP 4

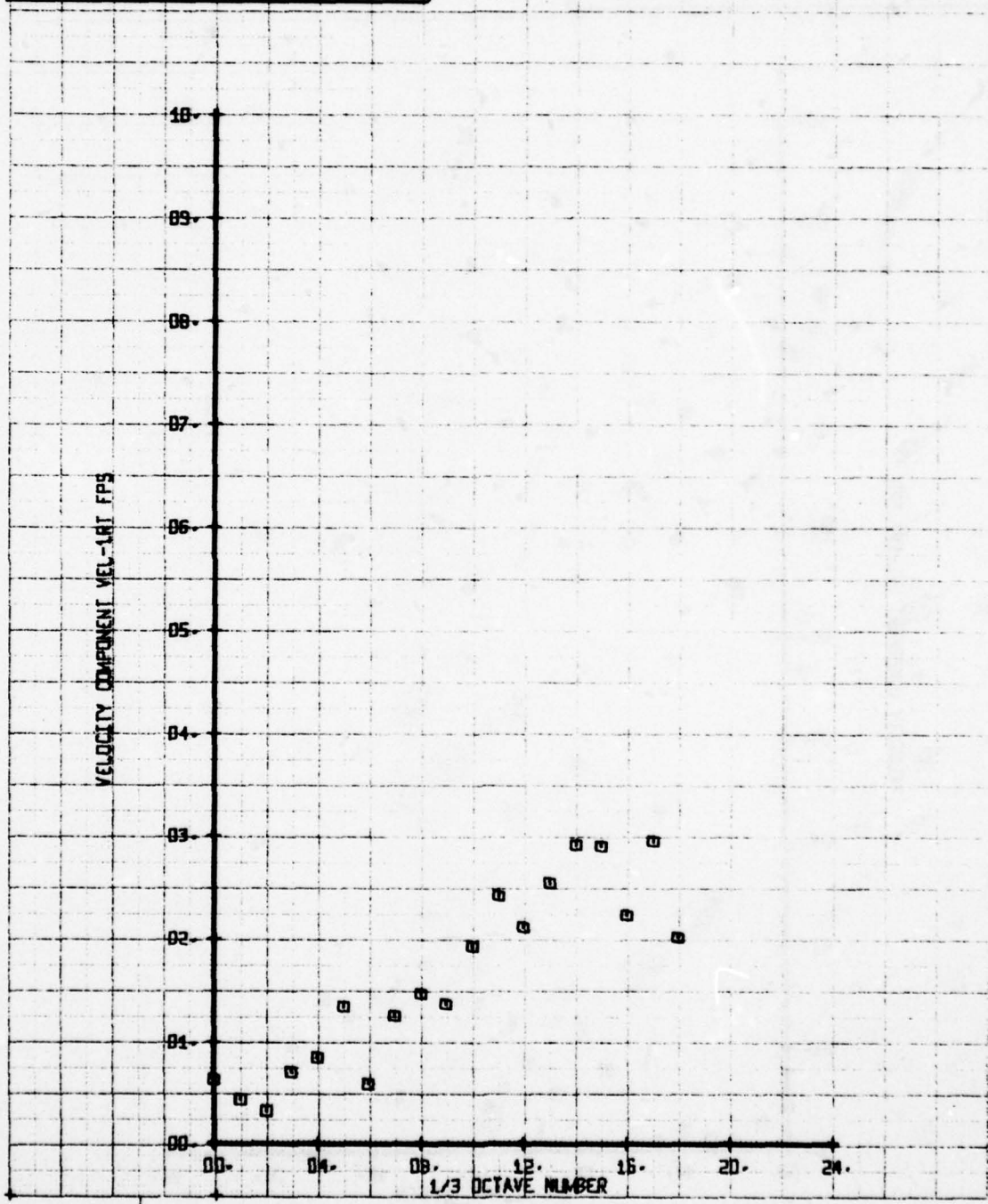
SYM  
 □

LEGEND  
 CH 74  
 PARAMETER  
 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W BODY 1D-4D-1-250 NO BLOS  
 RUN 161 TP 5

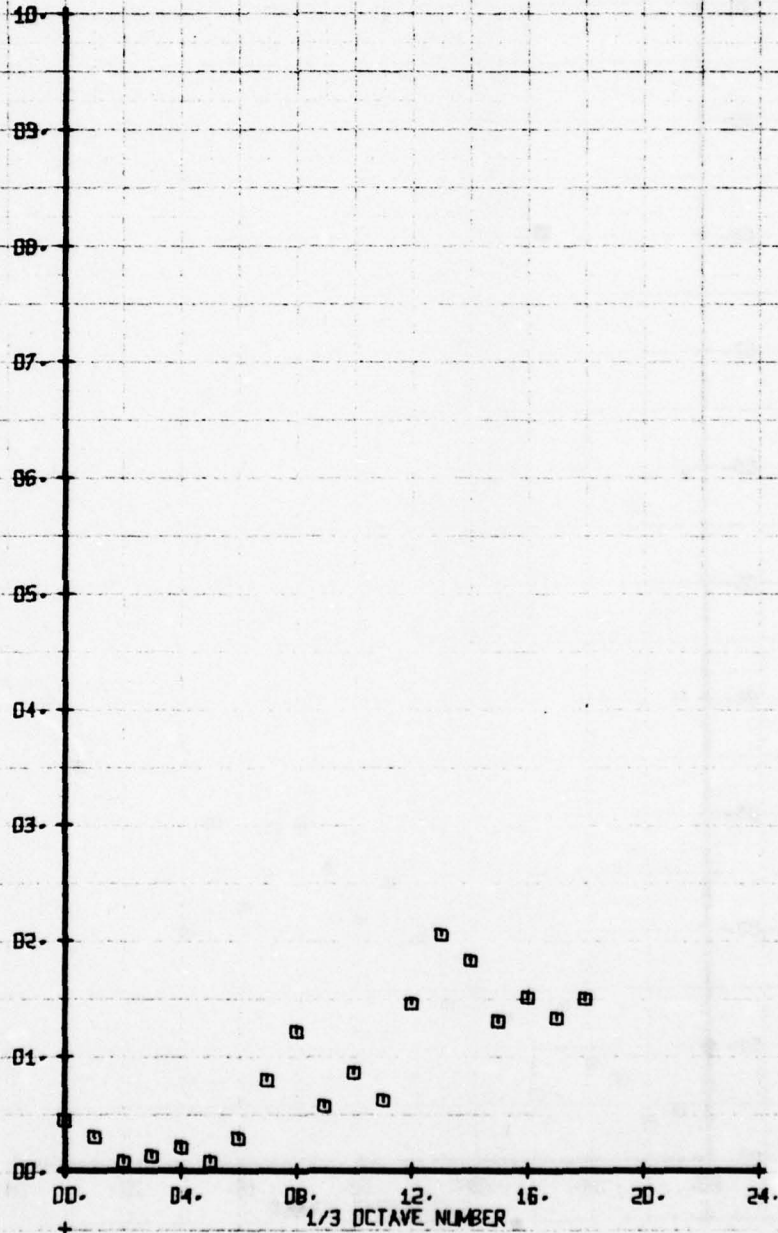
SYM	CH	PARAMETER
□	74	VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W L80Y 10-40-1-250 NO BLOS  
RUN 161 TP 6

SYM	CH	PARAMETER
□	74	VEL-1RT

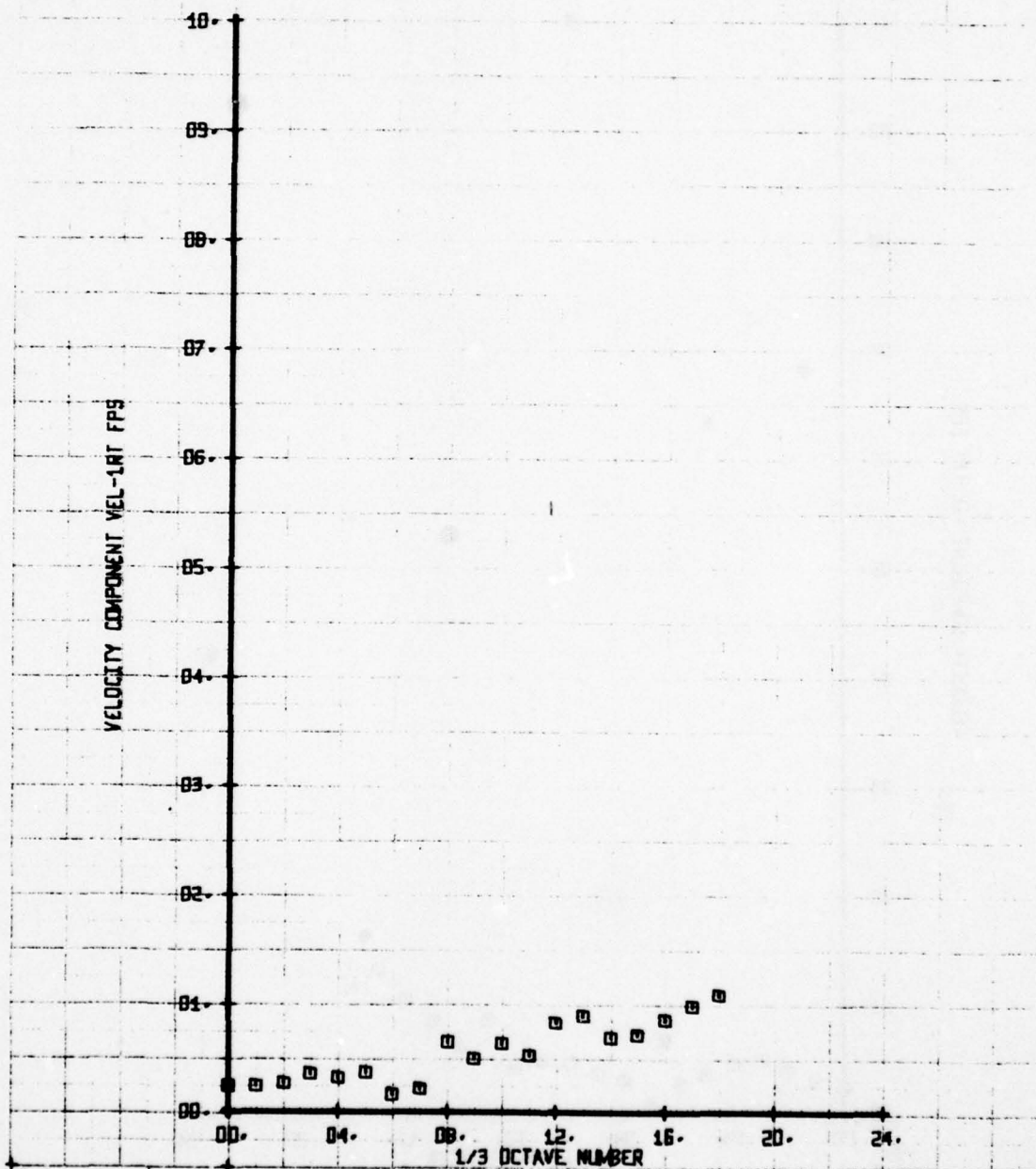
VELOCITY COMPONENT VEL-1RT FPS





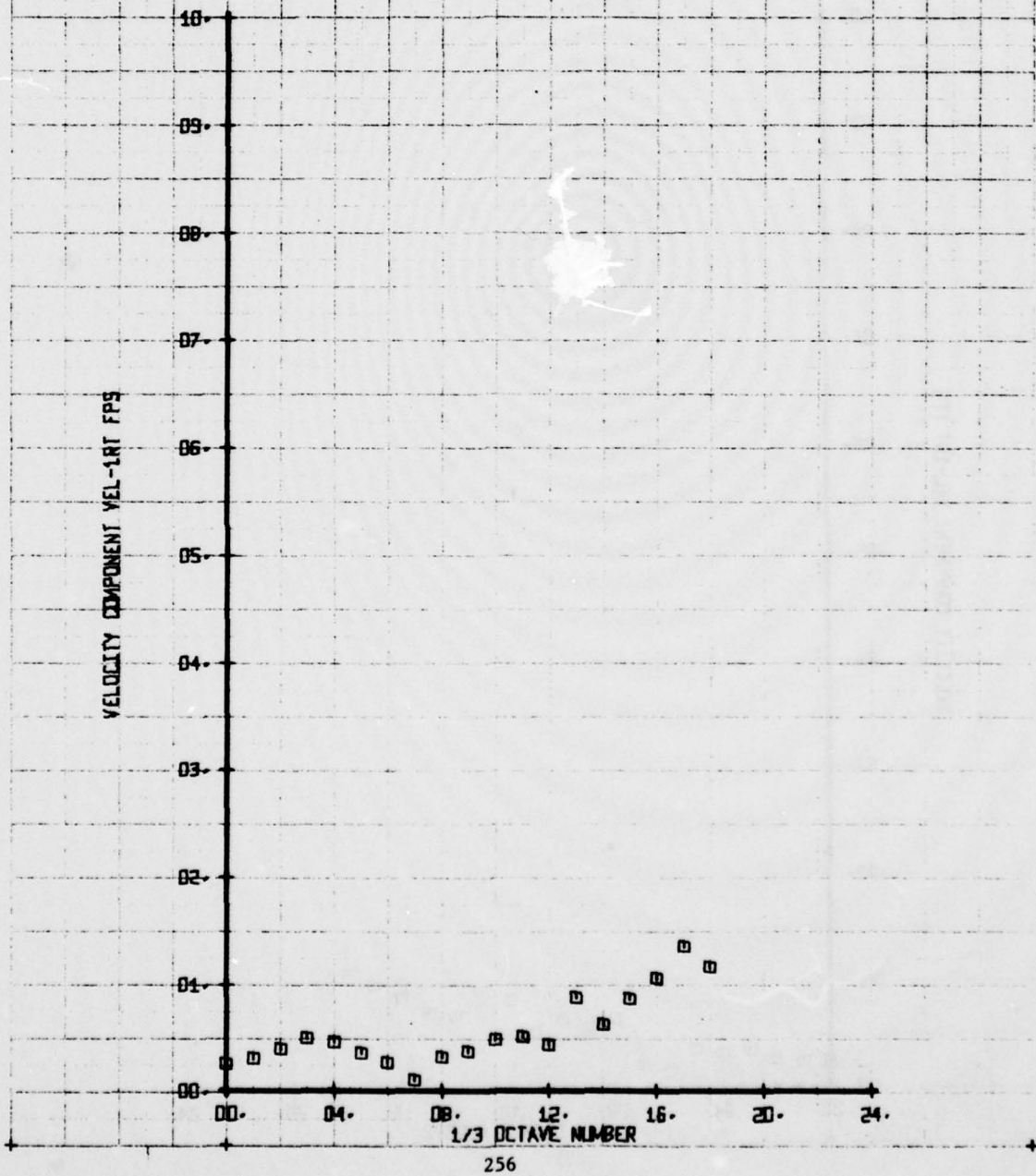
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBDY 10-40-1-25G NO BLOS  
 RUN 161 TP 7

LEGEND  
 SYM CH PARAMETER  
 □ 74 VEL-1RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LRDY 10-40-1-250 NO BLOS  
 RUN 161 TP B

LEGEND	
SYM	CH
□	74
	PARAMETER
	VEL-1RT



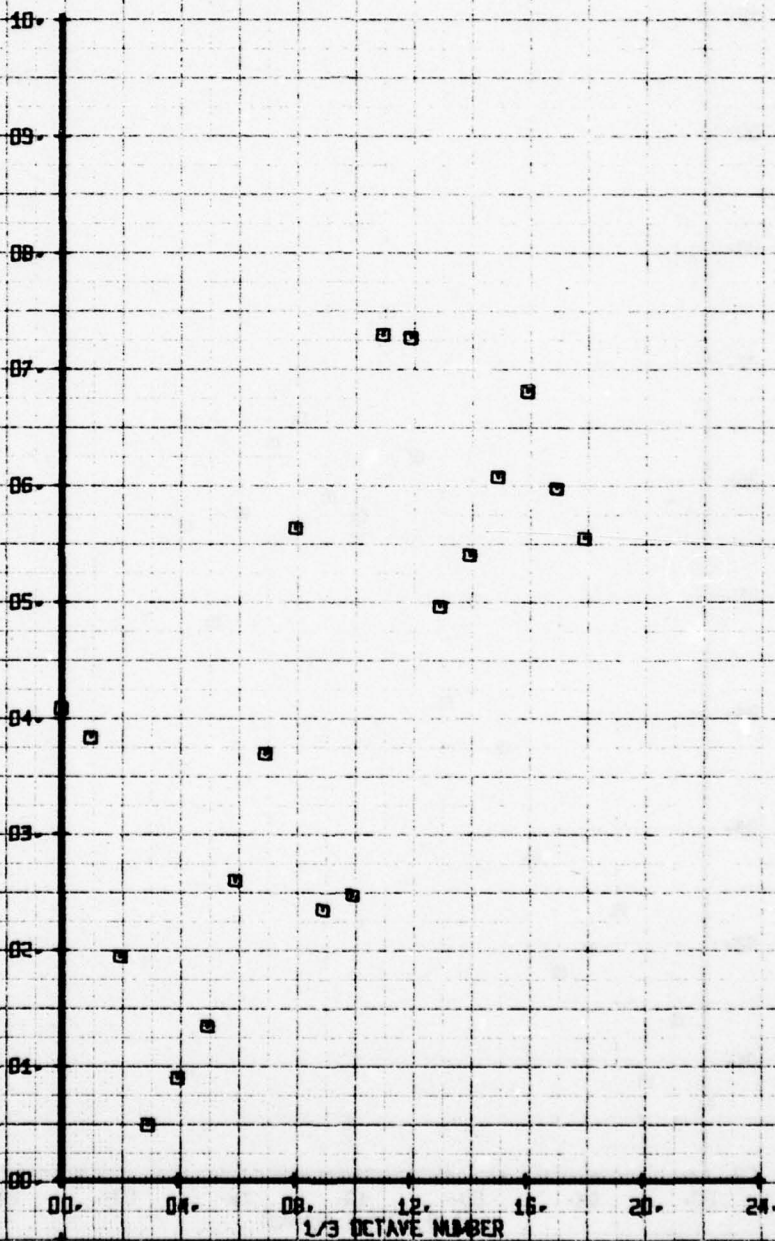
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W UBDY 10-40, 1-25G NO BLOS  
RUN 161 TP 2

SYM  
0

CH  
73

LEGEND  
PARAMETER  
VEL-1LT

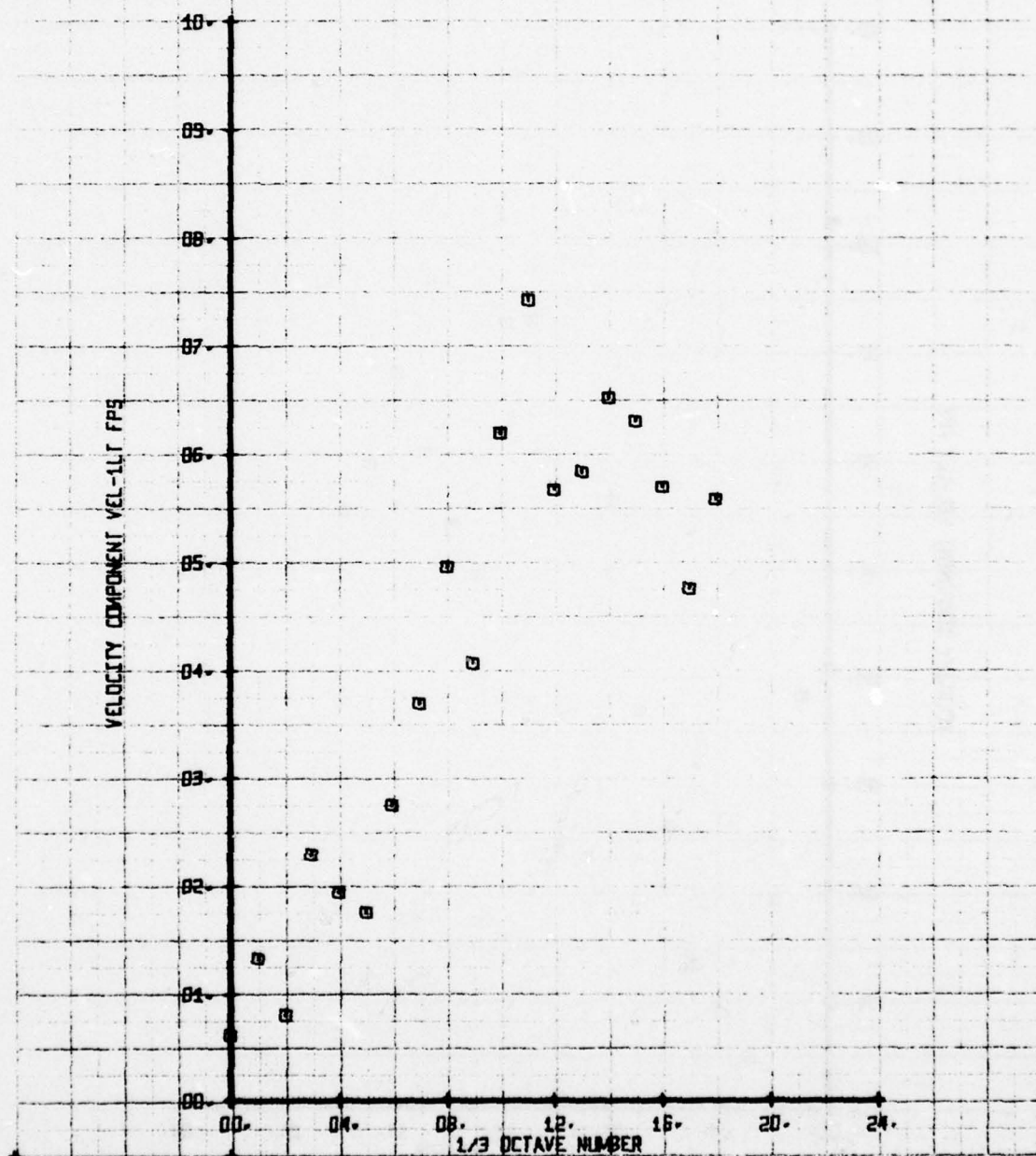
VELOCITY COMPONENT VEL-1LT FPS

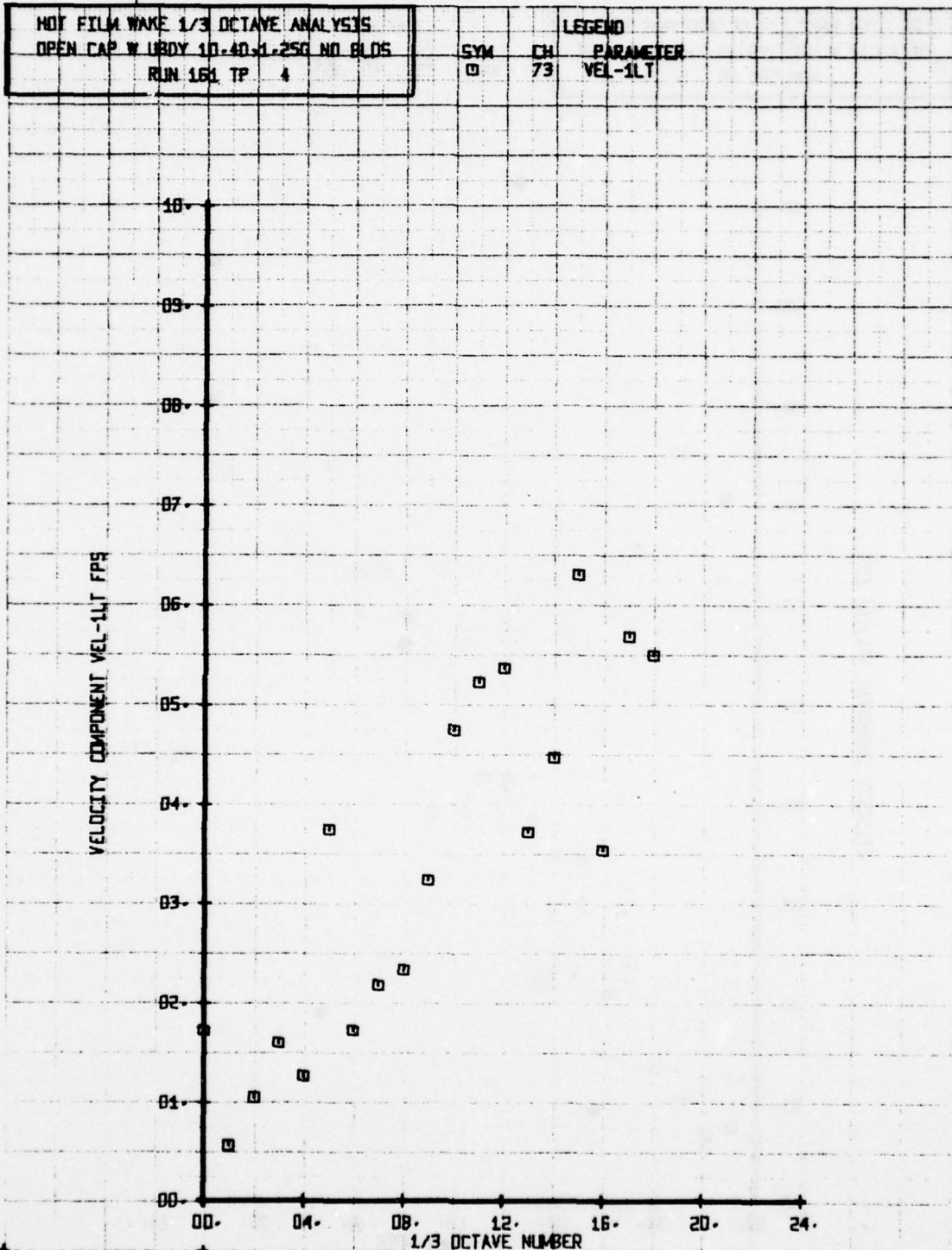




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBODY 10-40-1-25G NO BLOS  
 RUN 161 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 73 VEL-1LT

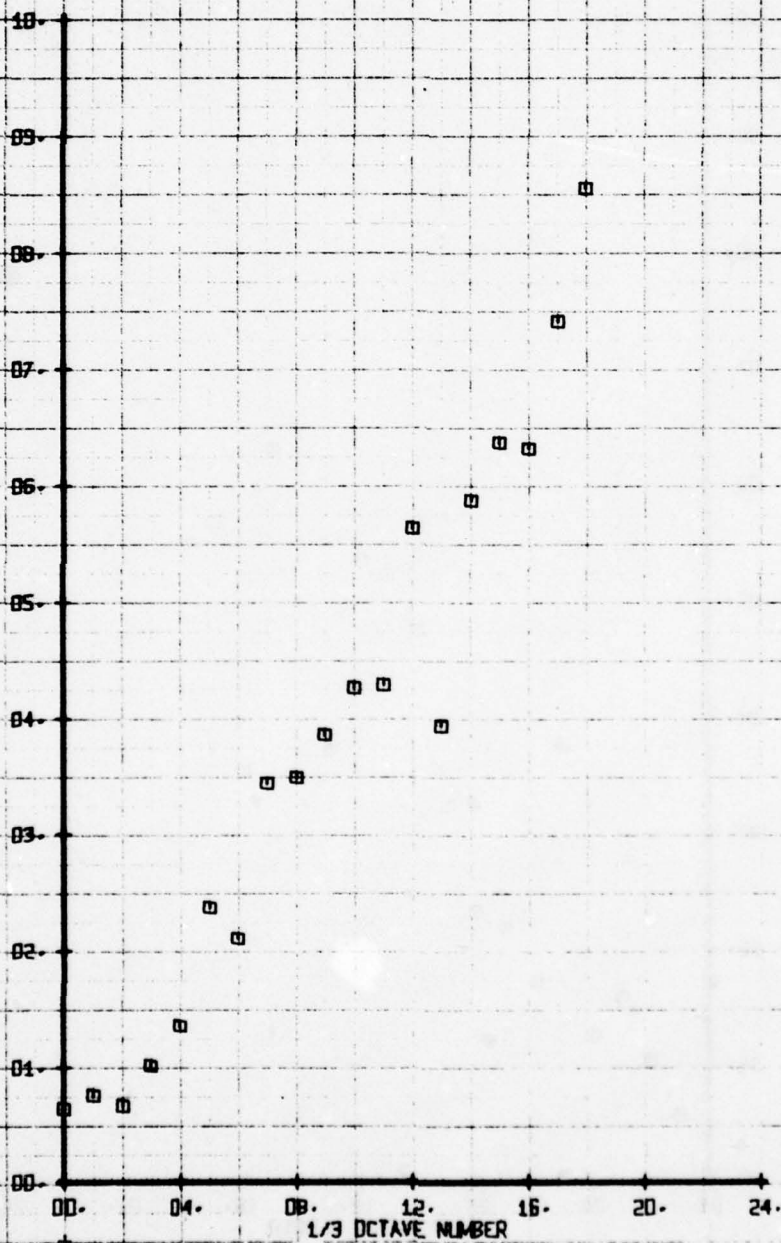




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 10-40-1-250 NO BLOS  
 RUN 161 TP 5

SYM	CH	PARAMETER
□	73	VEL-1LT

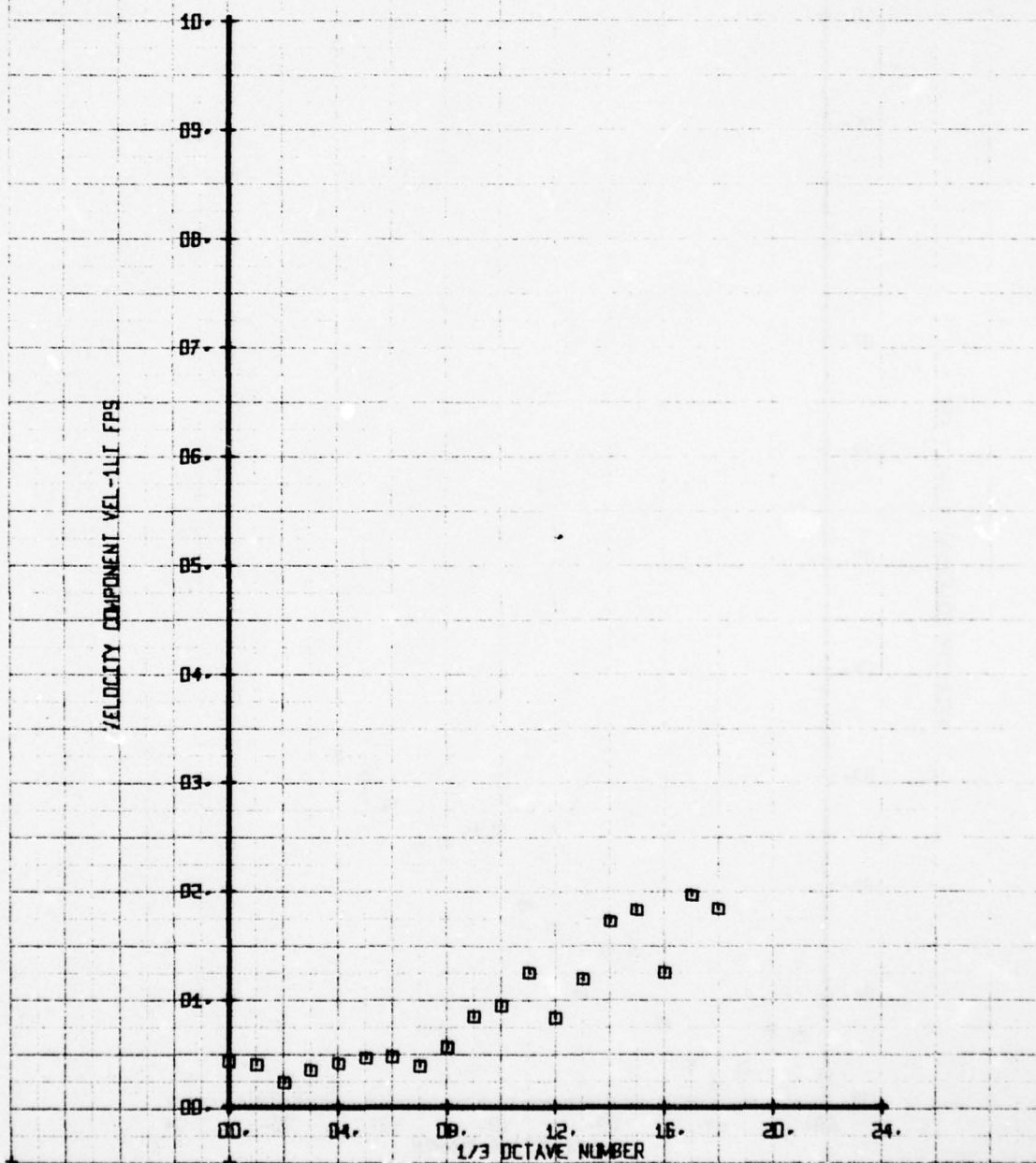
VELOCITY COMPONENT VEL-1LT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W. BODY 10-40, 1-25G NO. 8LOS  
 RUN 161 TP 6

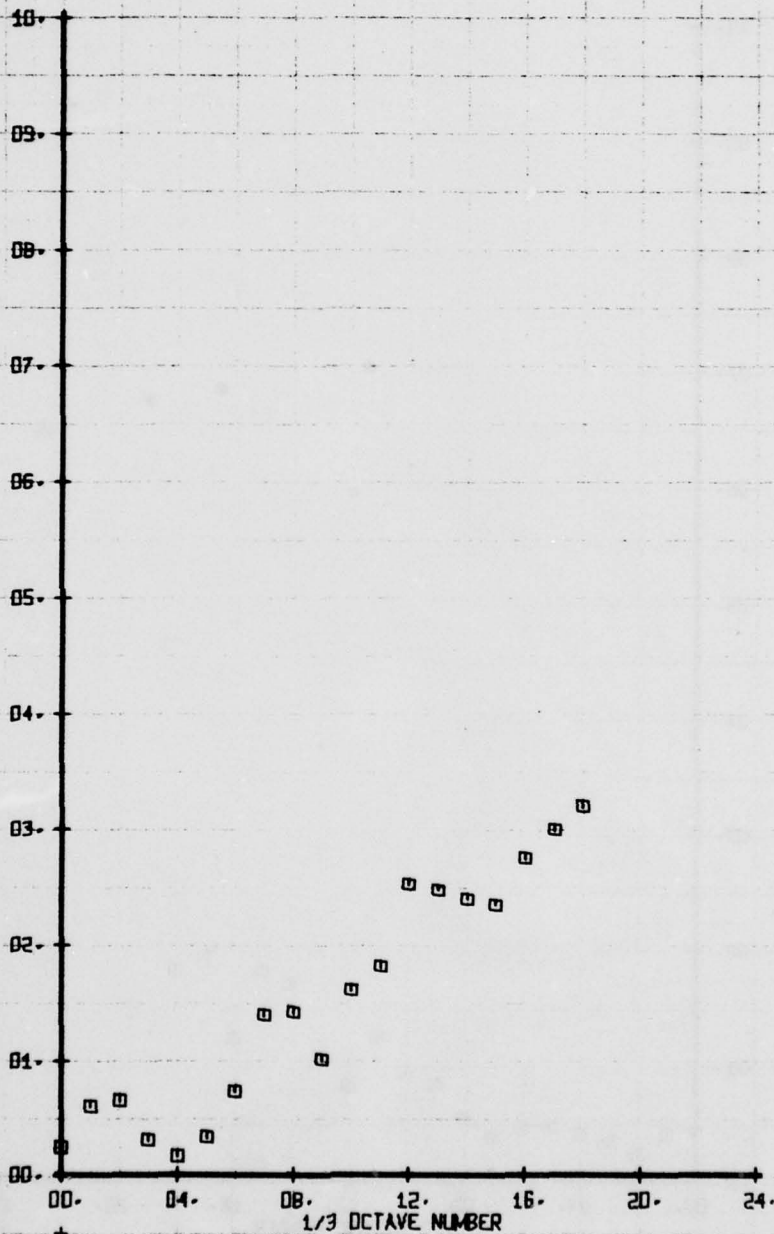
LEGEND  
 SYM CH PARAMETER  
 □ 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-40.1-250 NO BLOS  
 JUN 1961 TP 7

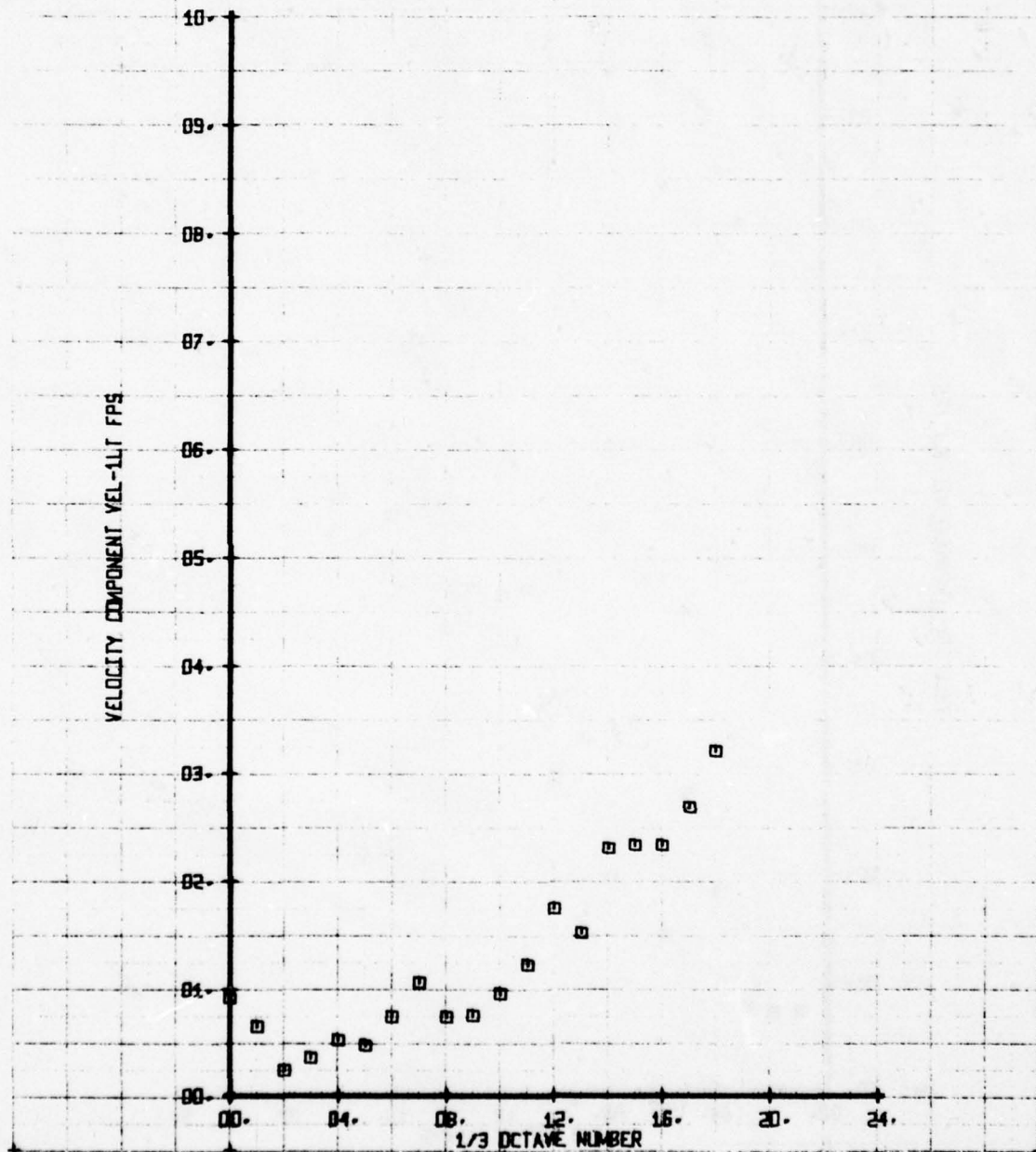
SYM	CH	PARAMETER
□	73	VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS

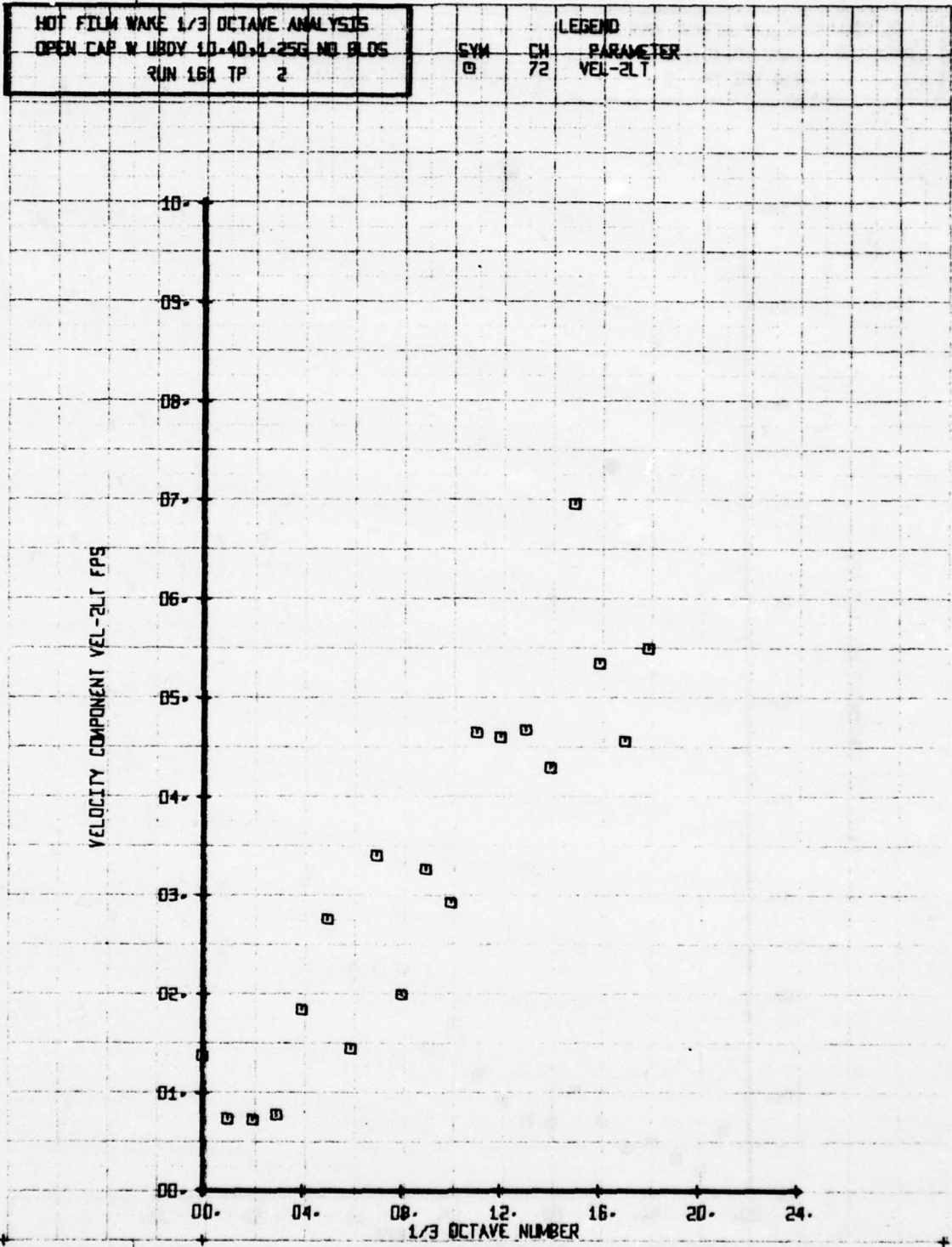


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBDY 10-40:1-25G NO BLOS  
 RUN 161 TP B

LEGEND		
SYM	CH	PARAMETER
□	73	VEL-1LT



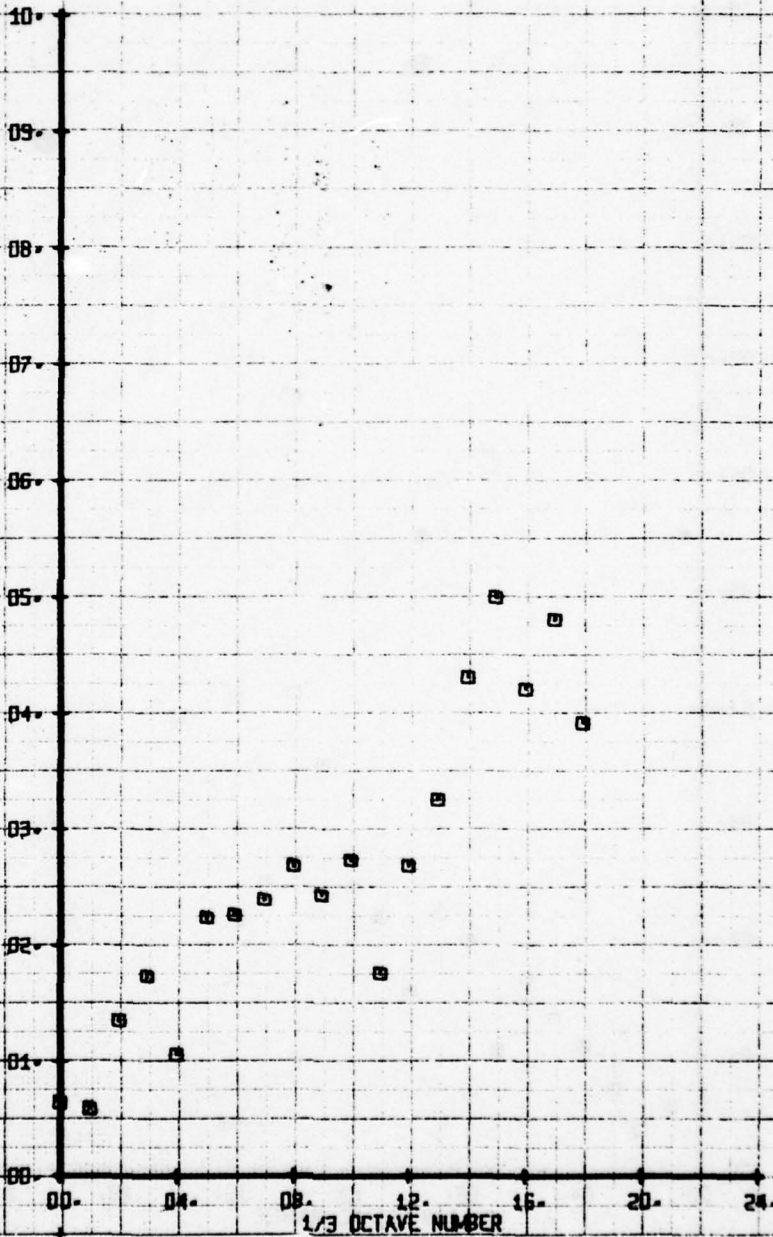




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UB0Y 10-40.1-25G NO BLOS  
 RUN 161 TP 3

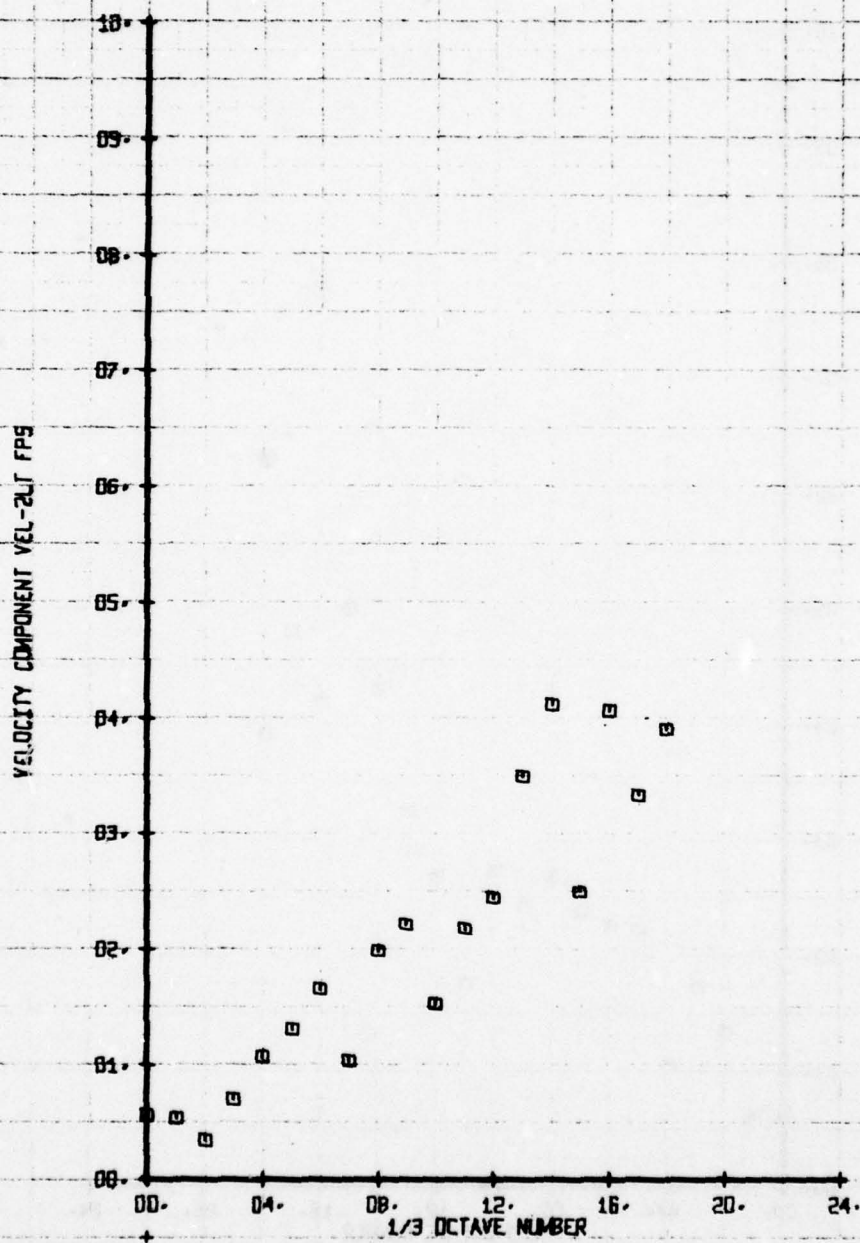
SYM	CH	PARAMETER
□	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40, 1-256 NO BLOS  
 RUN 161 TP 4

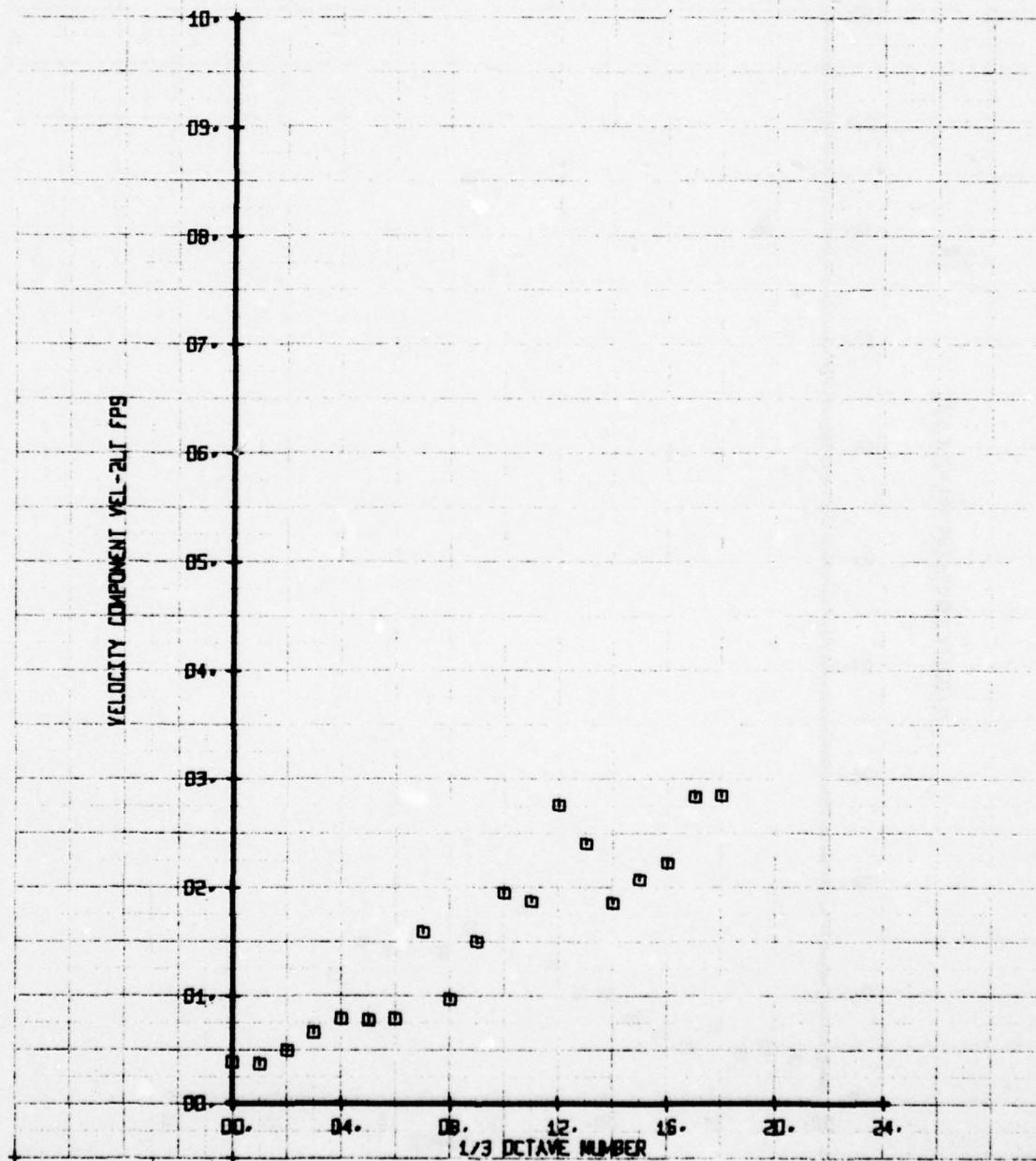
SYN CH LEGEND  
 □ 72 PARAMETER  
 VEL-2LT

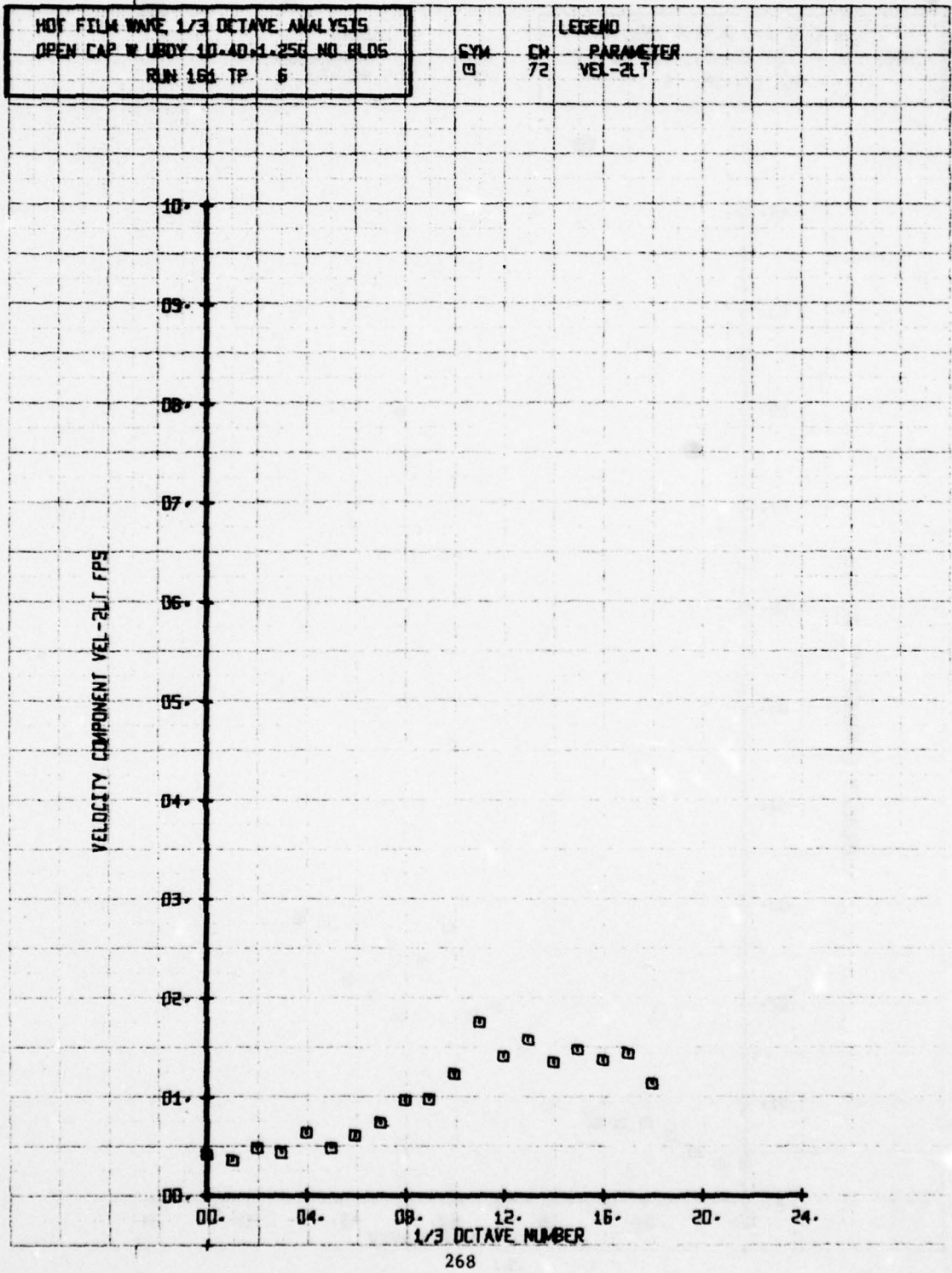




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W. BODY 10.40.1.256 NO BLOS  
RUN 161 TP 5

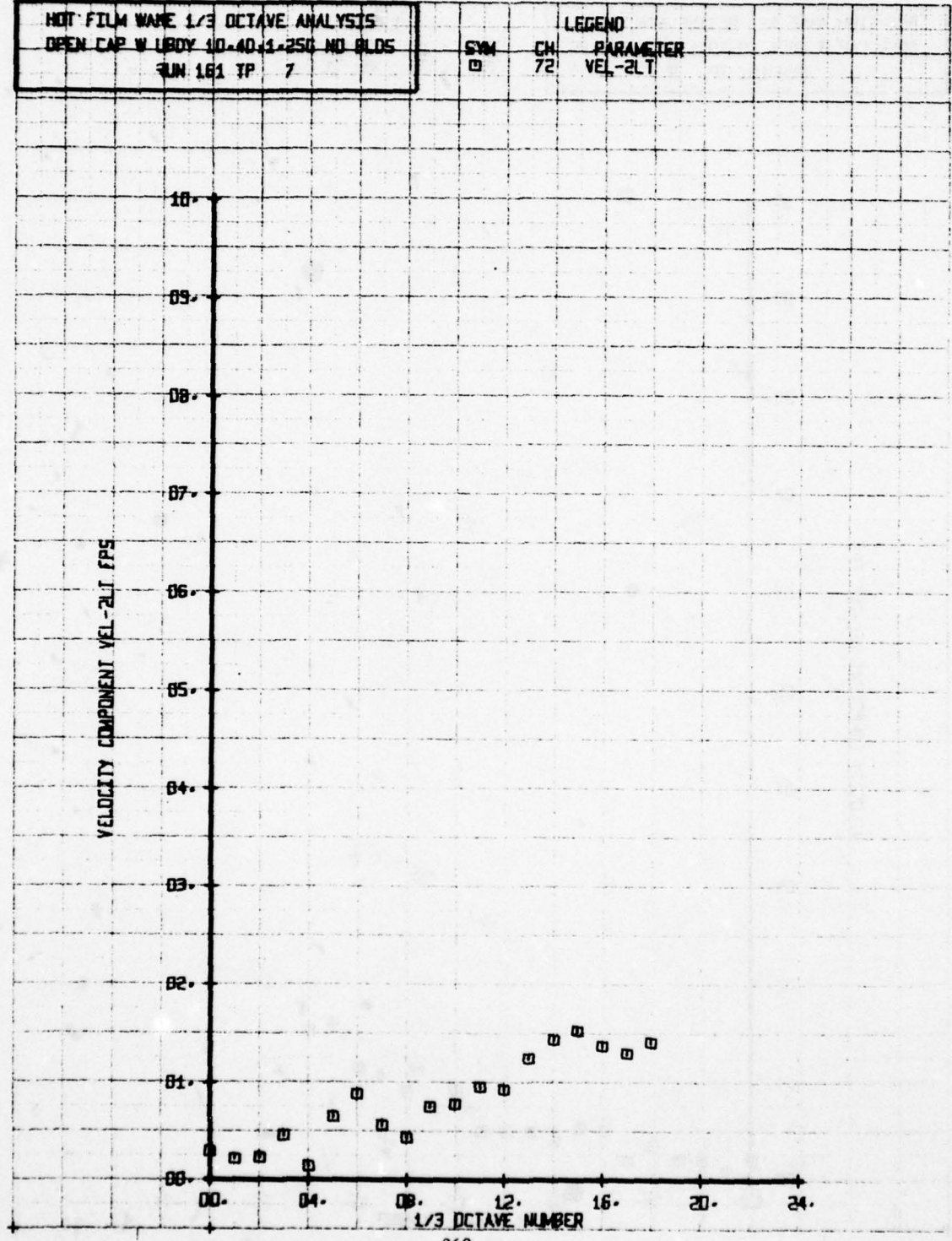
LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-40-1-250 NO BLOS  
 RUN 161 TP 7

SYM	CH	PARAMETER
□	72	VEL-2LT

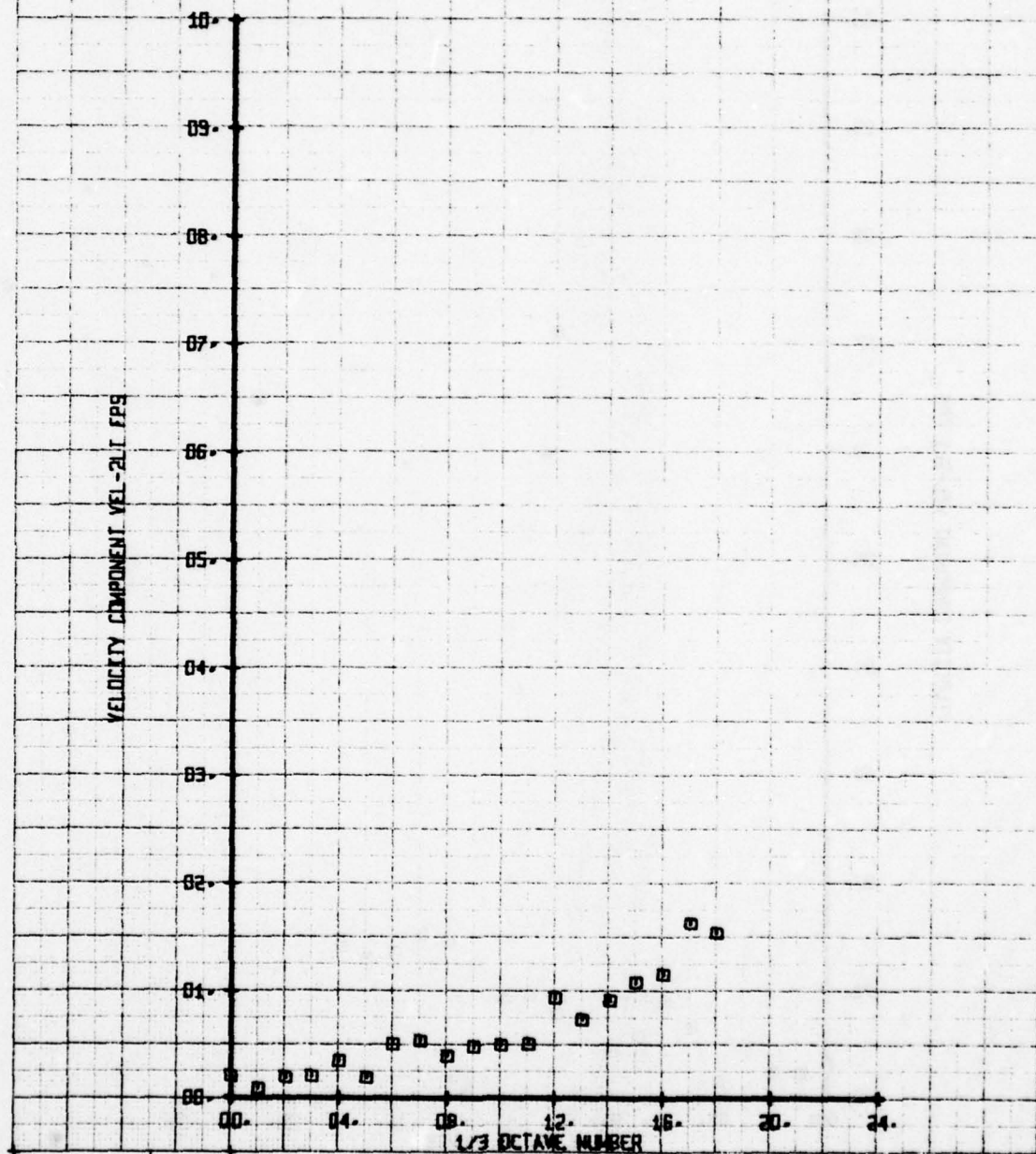




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 10.40.1.256 NO BLS  
 RUN 161 TP 8

LEGEND  
 CH 72  
 PARAMETER  
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



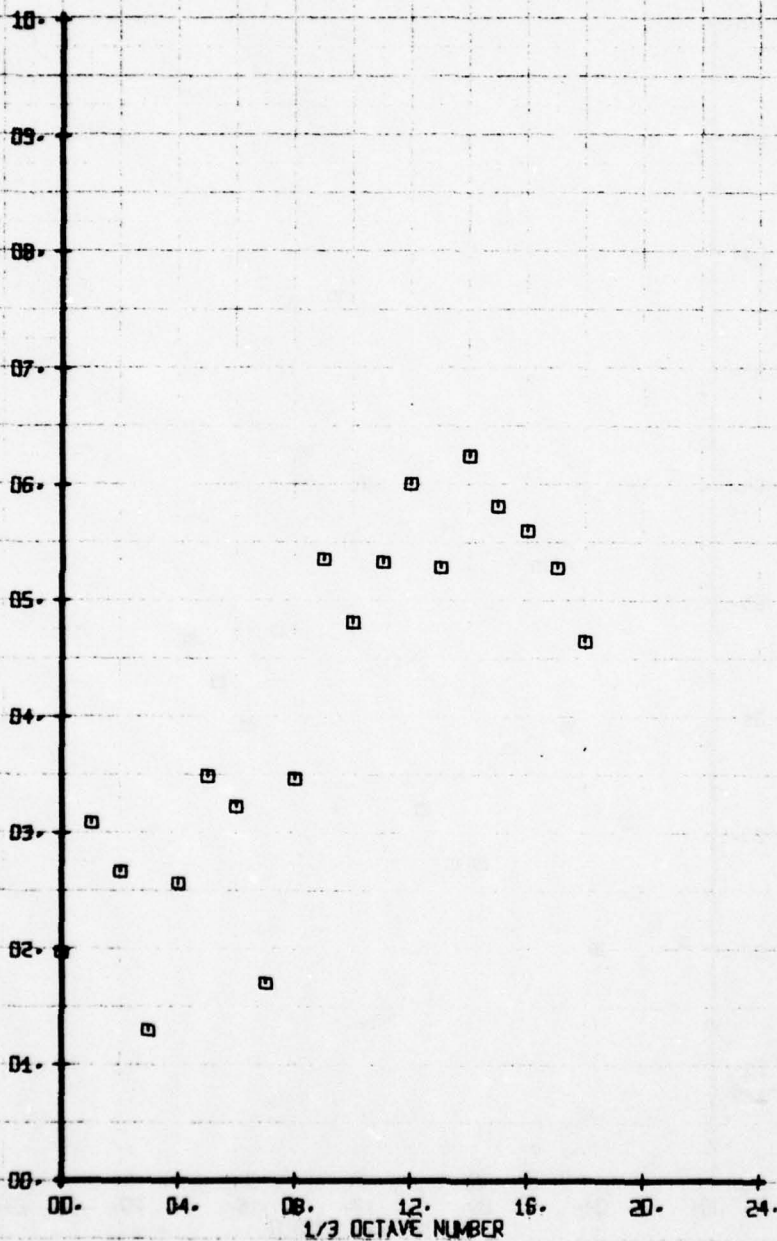
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UROY 10-40-1-250 NO BLOS  
 RUN 161 TP 2

SYM  
 □

CH  
 70

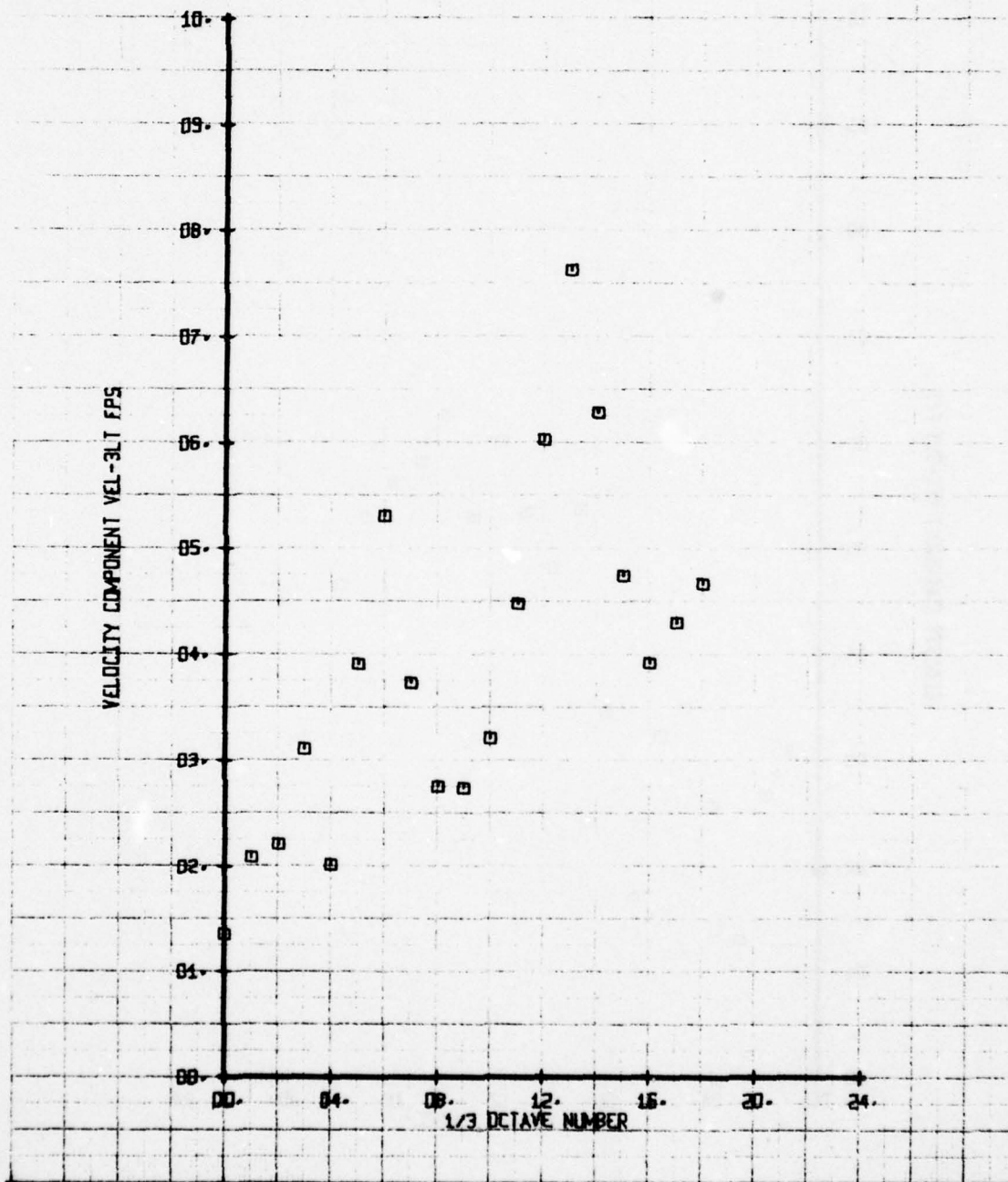
LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W BODY 10.40.1.25G NO 8LDS  
 RUN 161 TP 3

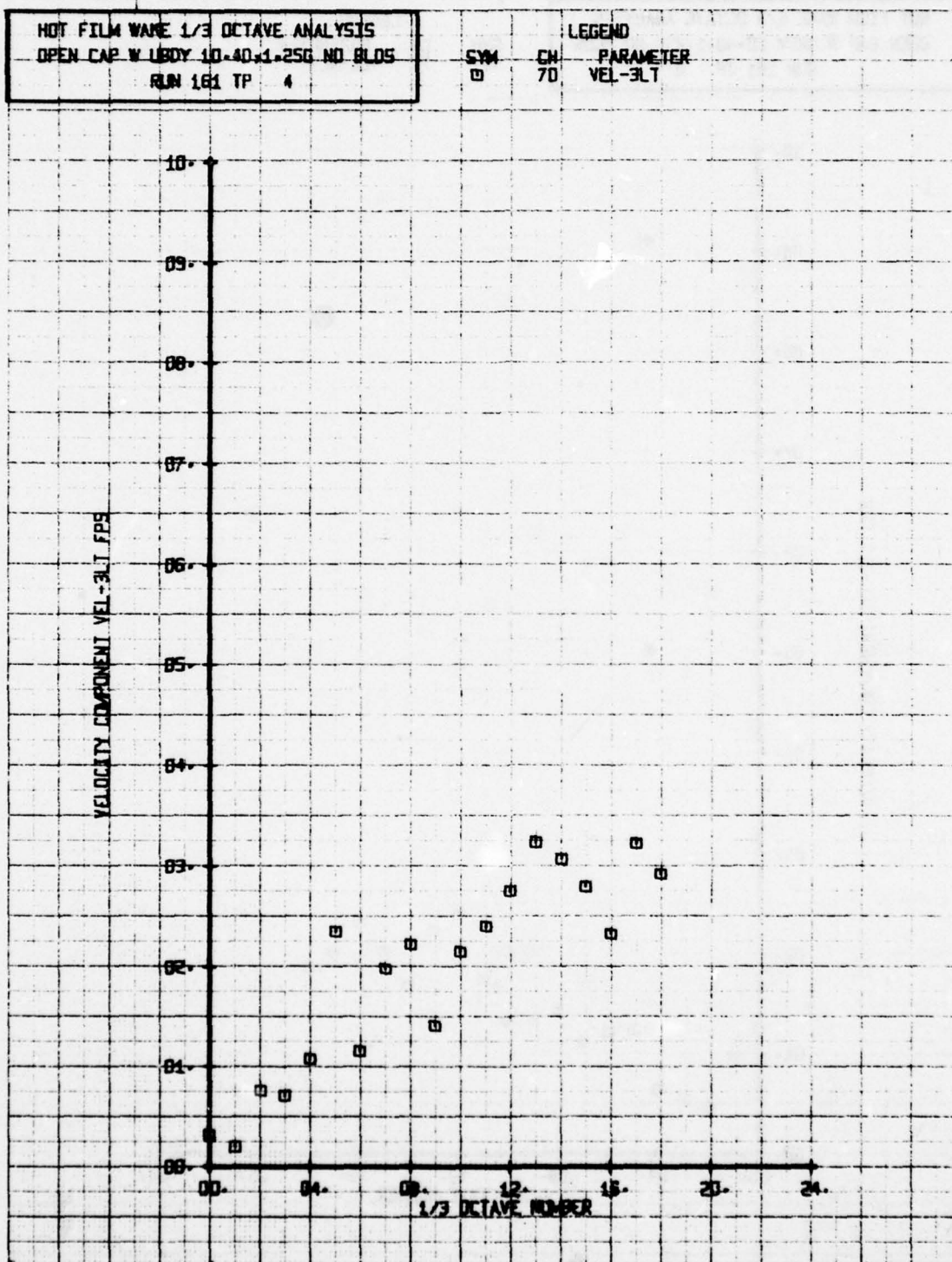
LEGEND  
 CH 70  
 PARAMETER  
 VEL-3LT





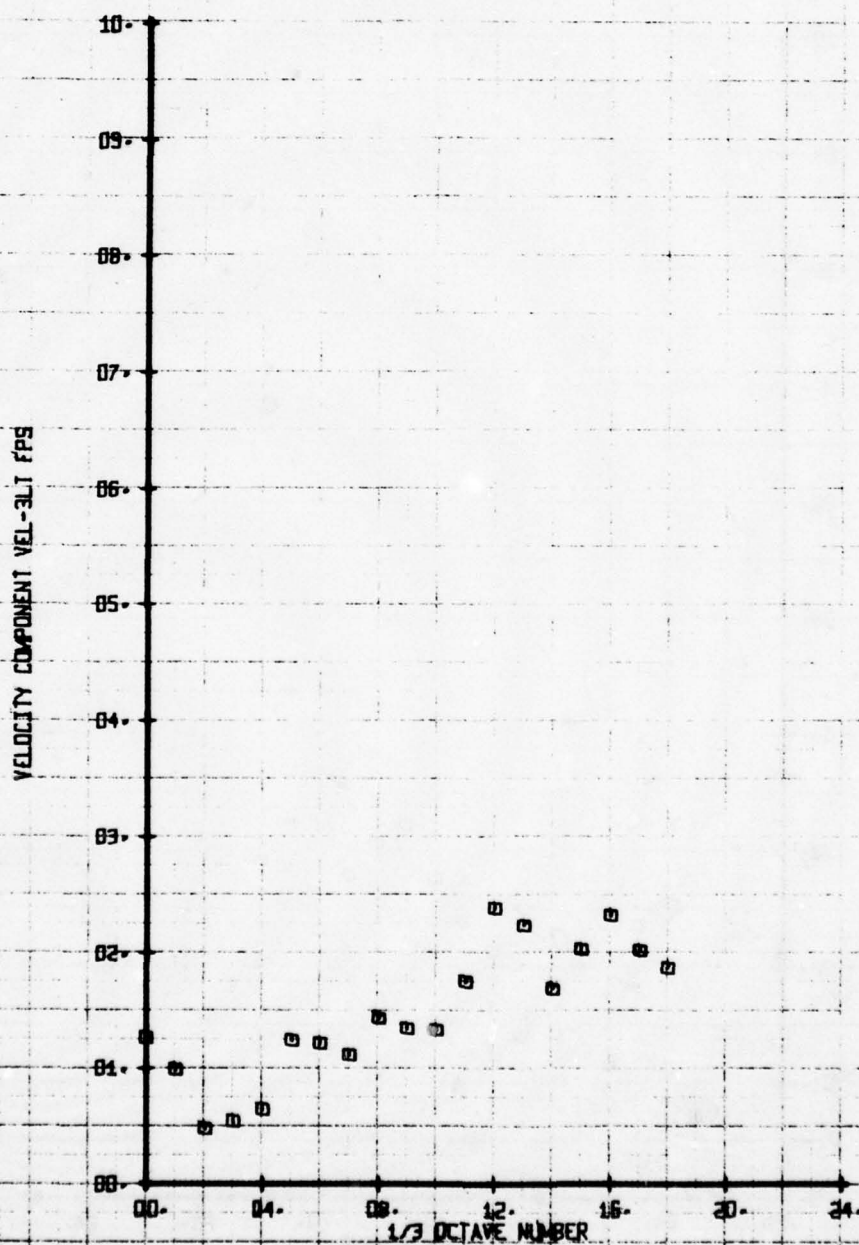
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 10-40-1-25G NO BLOS  
 RUN 161 TP 4

SYM	CH	PARAMETER
□	70	VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40:1-25G NO BLOS  
 RUN 181 TP 5

SYN CH PARAMETER  
 0 70 VEL-3LT



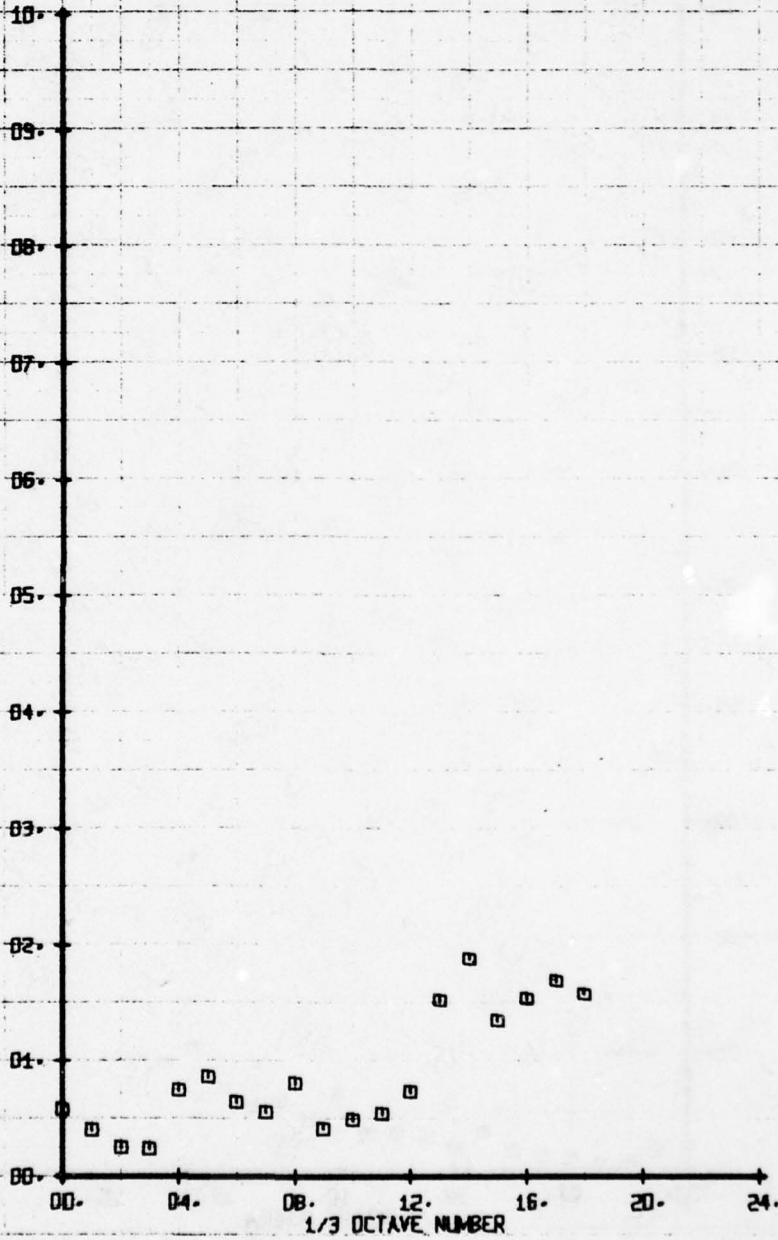
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40-1-250 NO BLOS  
 RUN 161 TP 6

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





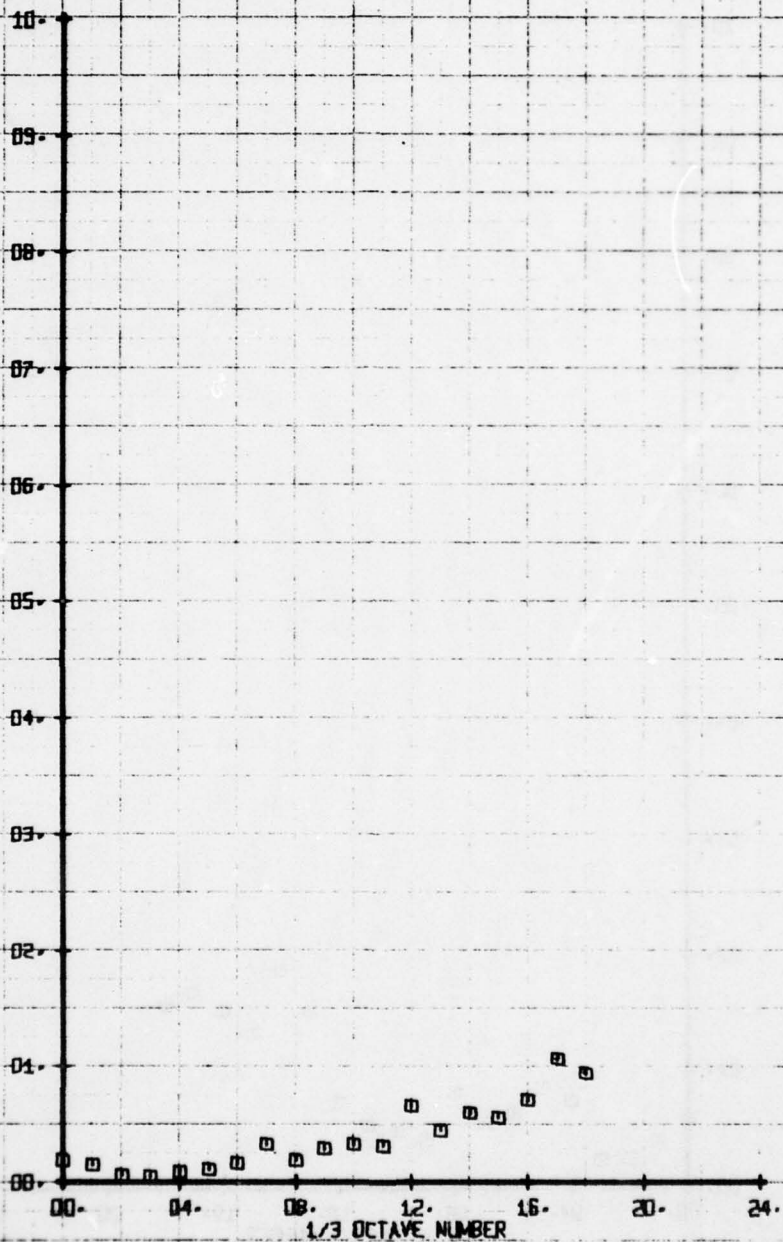
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 10-40-1-250 NO BLDS  
 RUN 181 TP 7

SVM  
 0

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HIT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-40.1-256 NO BLOS  
 RUN 161 TP 8

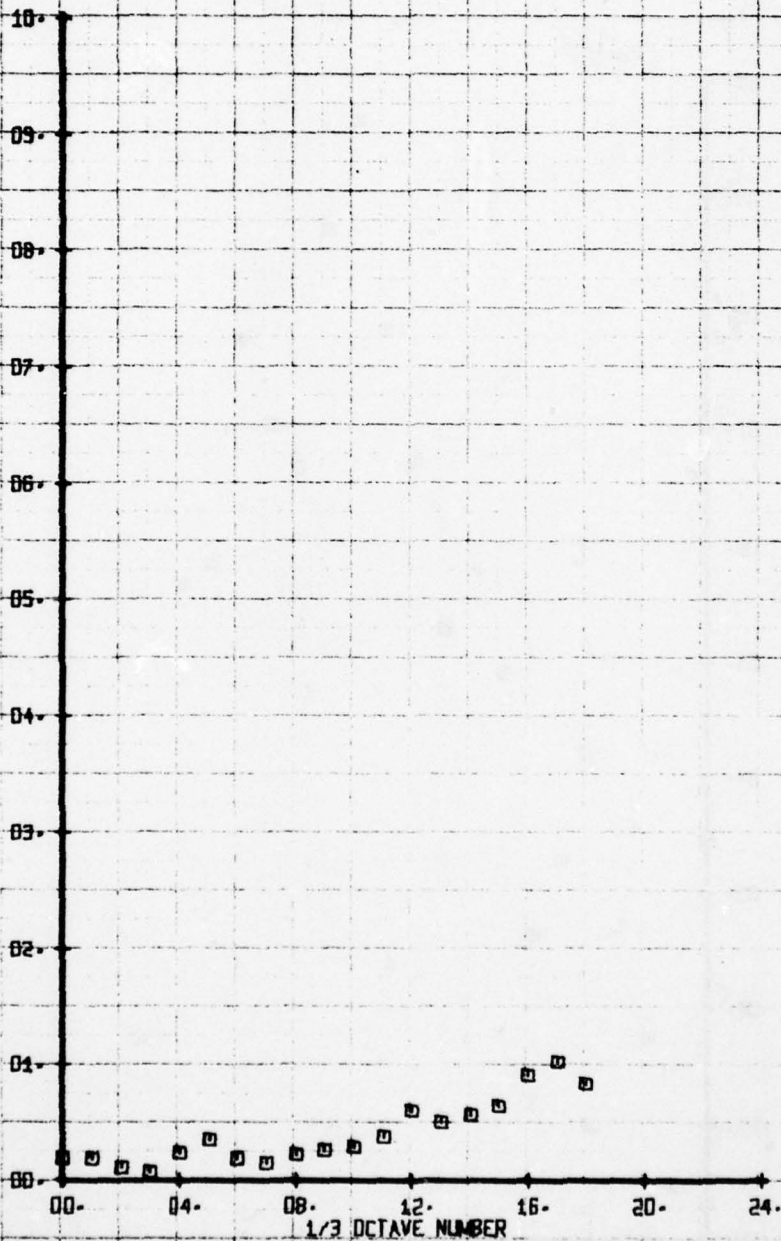
SYM  
 0

LEGEND

CH  
 70

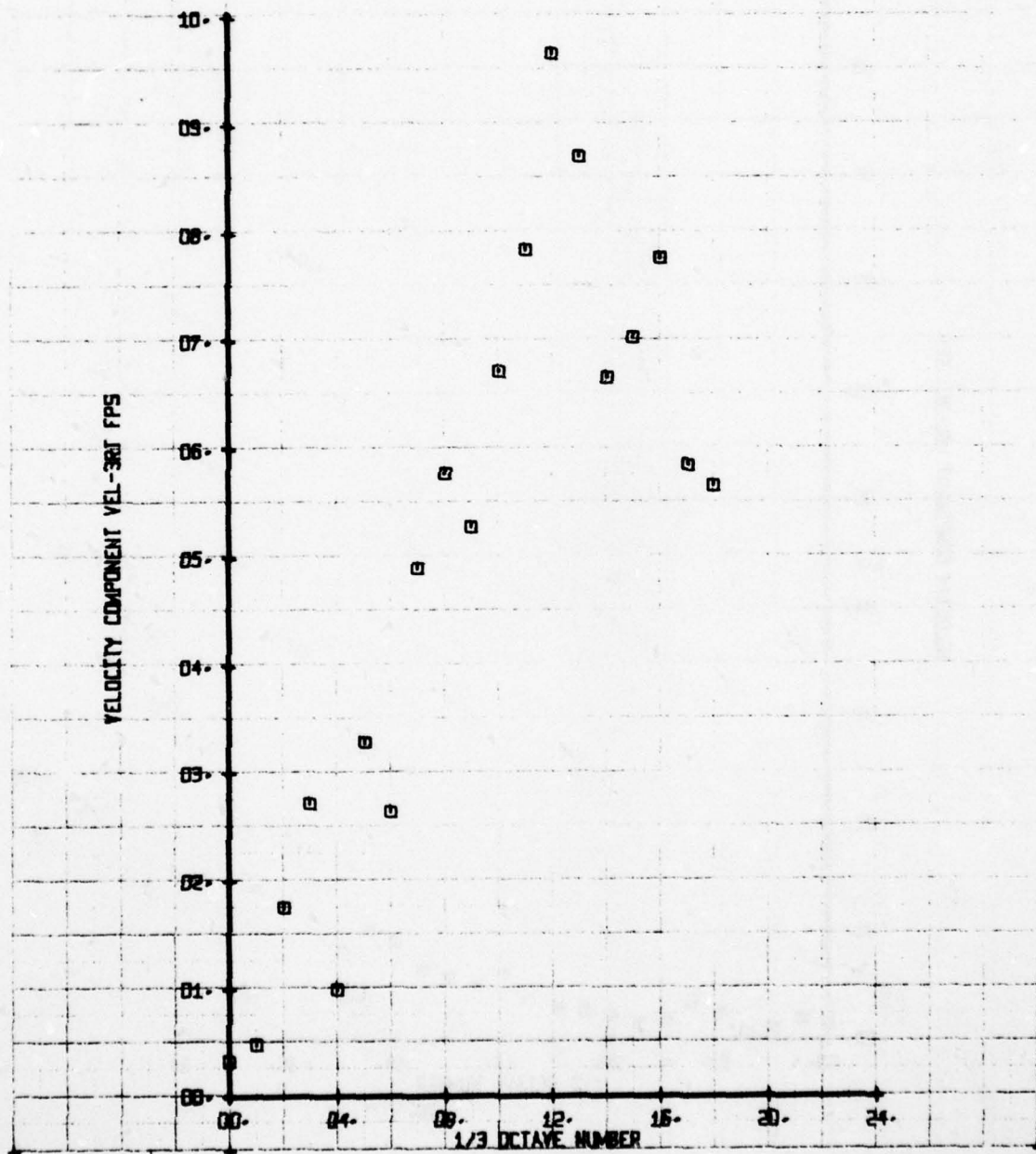
PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40+1-25G NO BLDS  
 RUN 154 TP 2

LEGEND  
 CH 71  
 PARAMETER  
 VEL-3RT





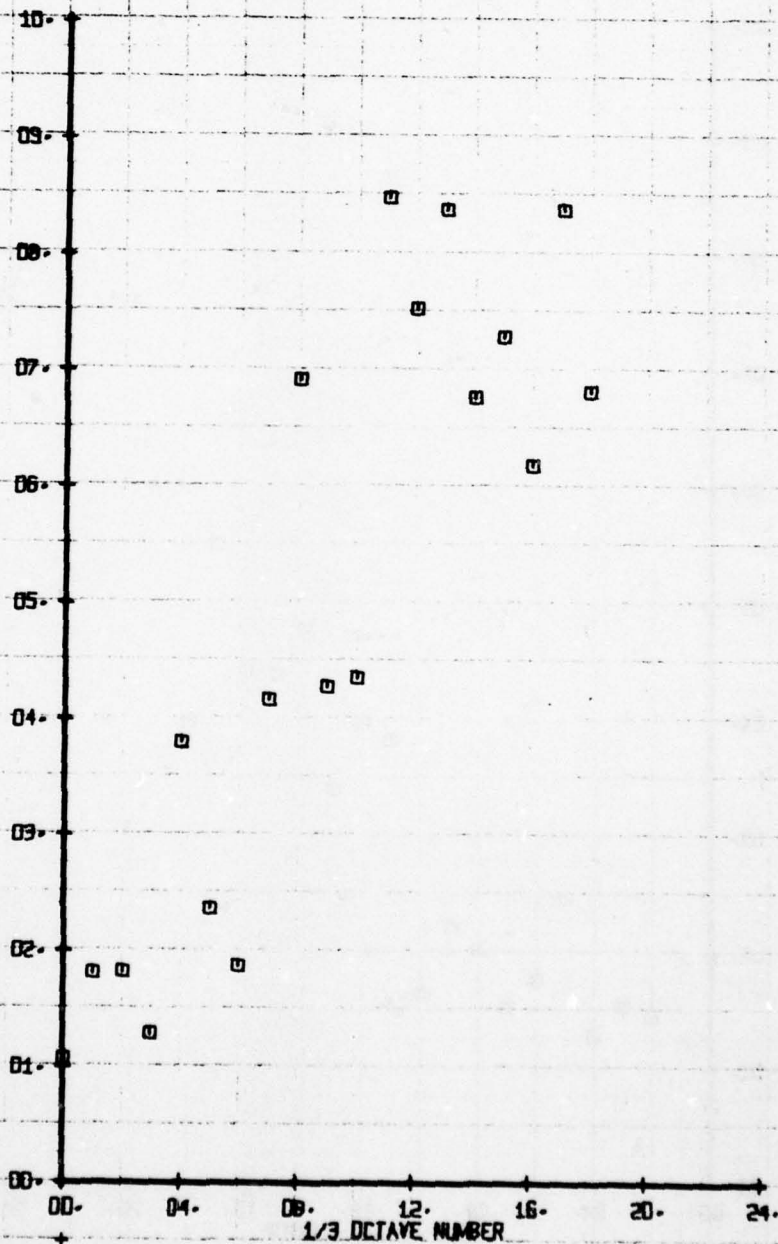
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UDDY 10-40-1-250 NO BLOS  
 RUN 154 TP 9

SYM  
 □

CH  
 71

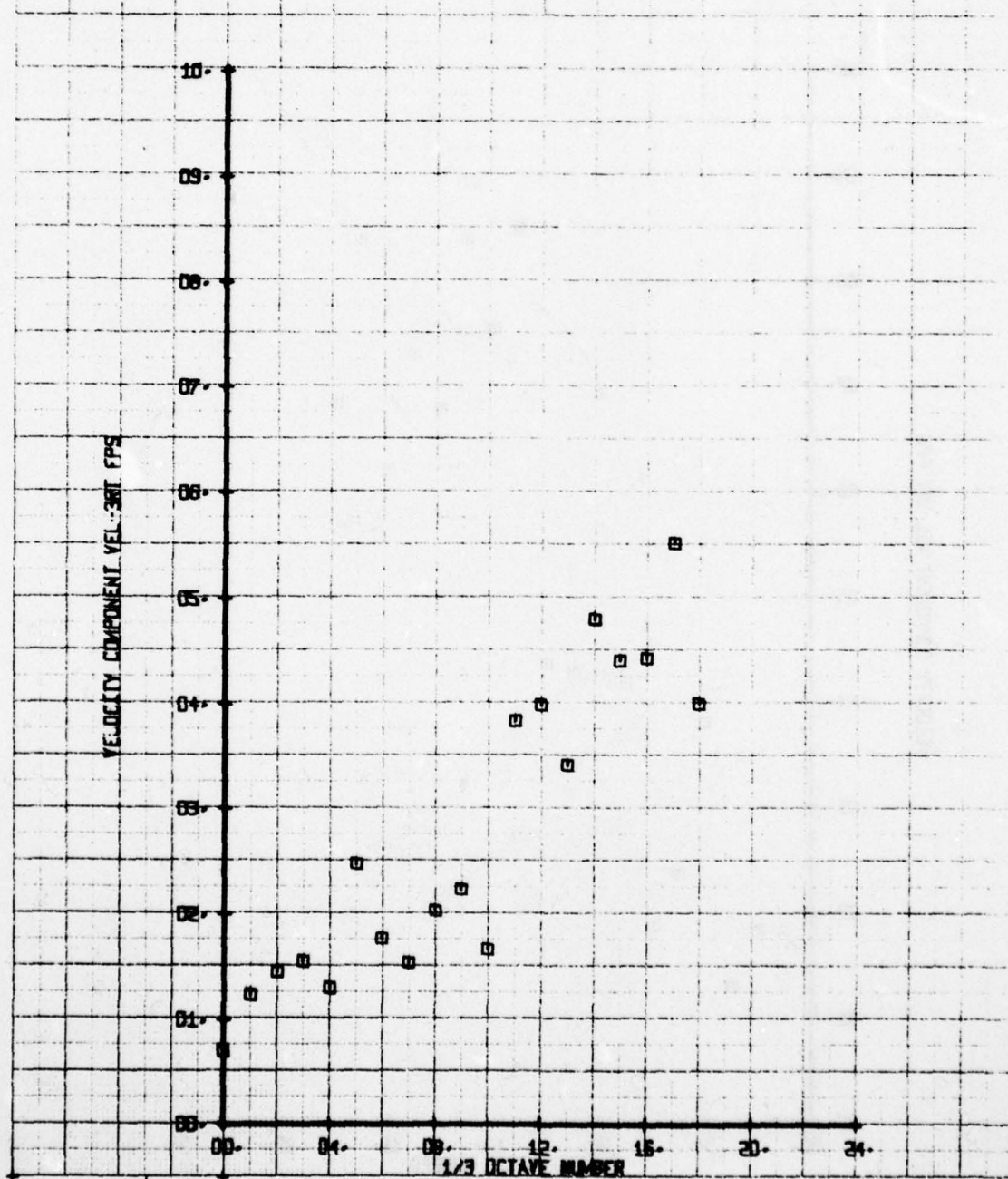
LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



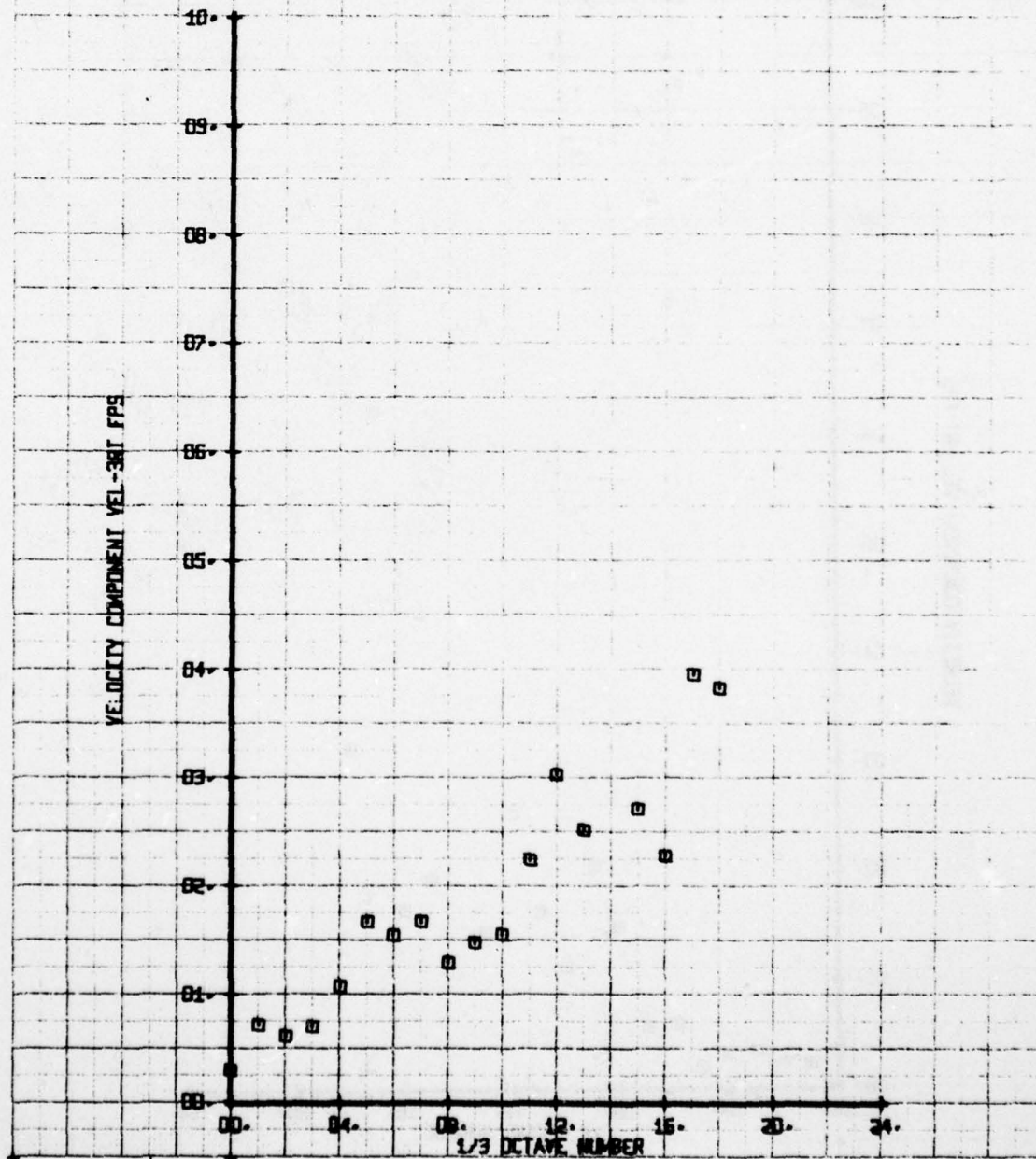
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-40-1-250 NO BLOS  
 RUN 194 TP 4

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



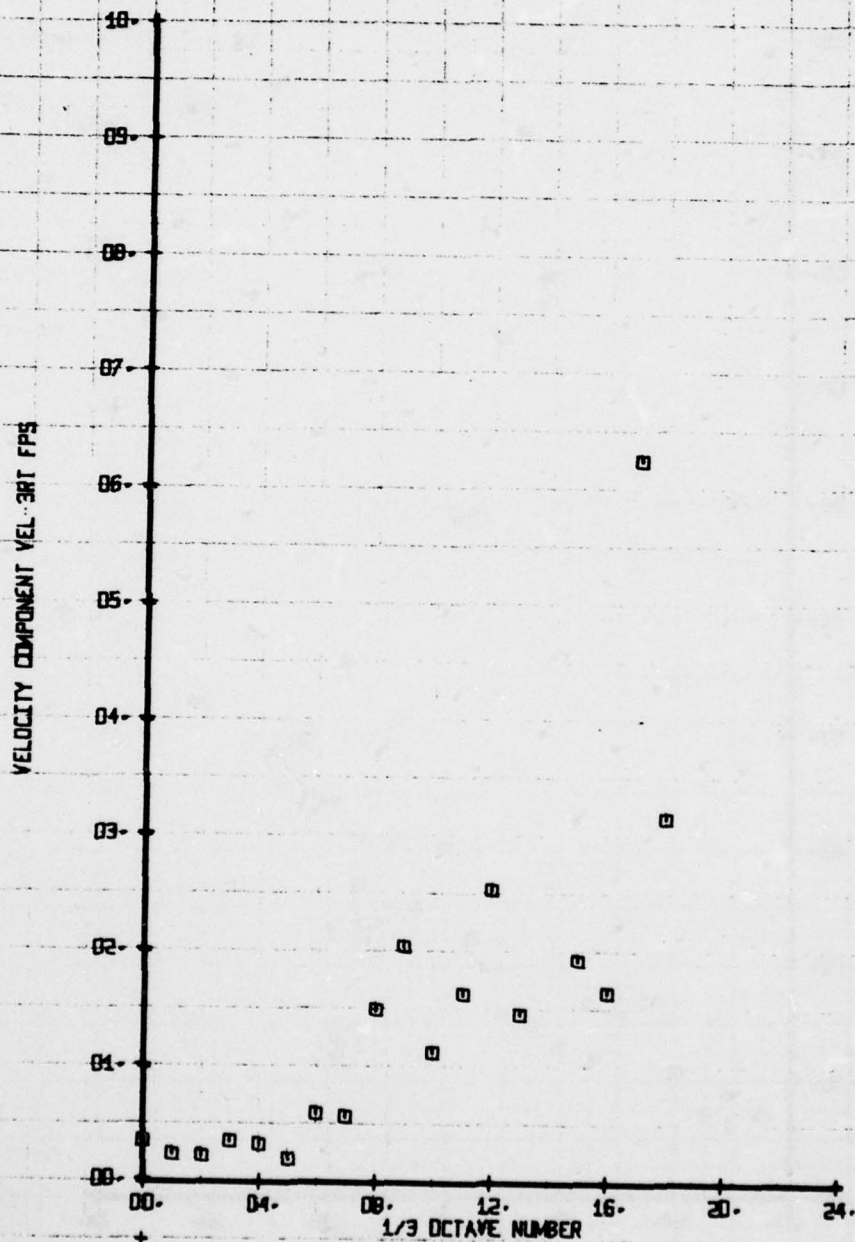
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W. BODY 10-40-1-250 NO BLDS  
 RUN 154 TP 5

SYM	CH	PARAMETER
□	71	VEL-3RT



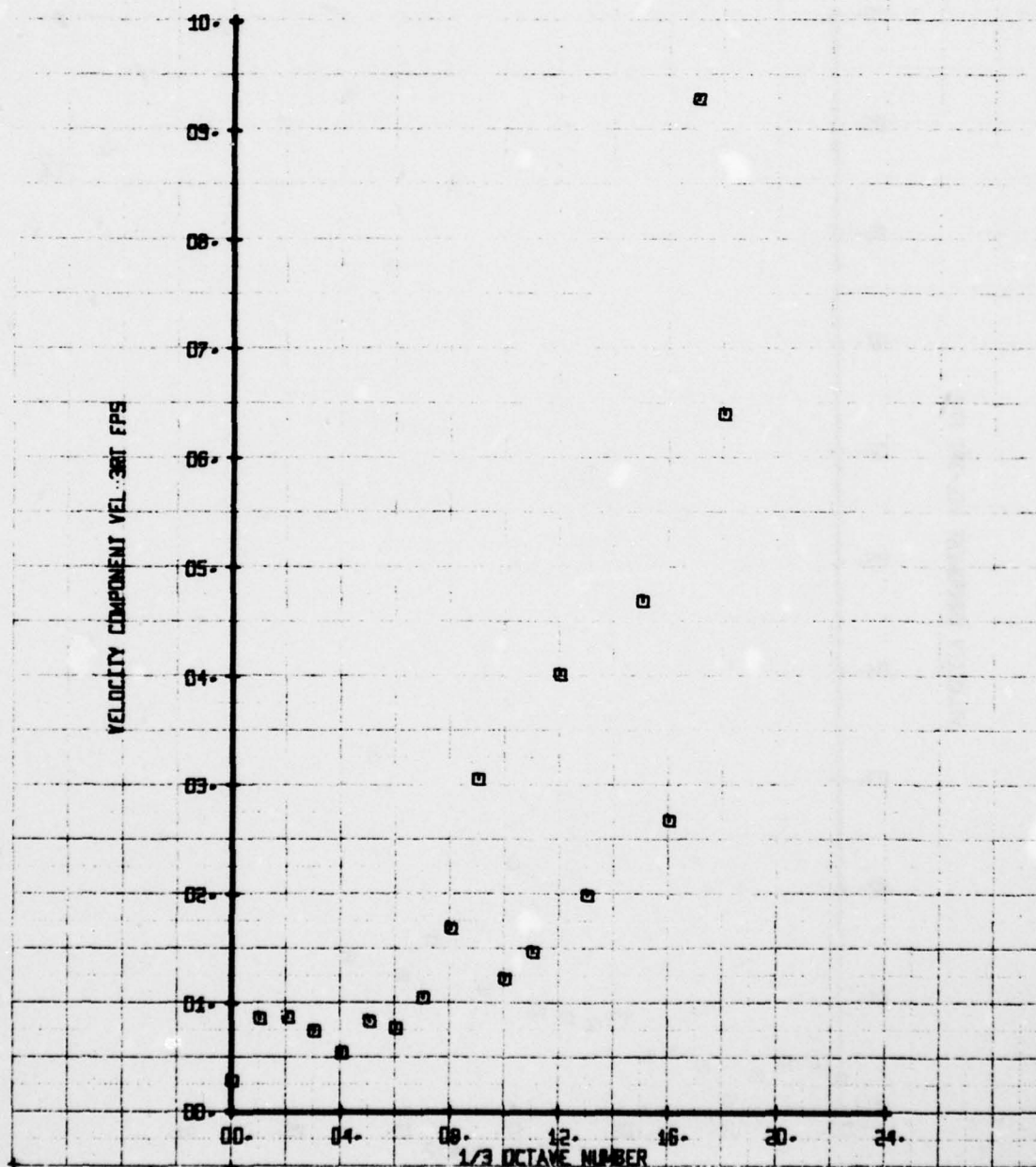


NOT FILM WARE 1/3 OCTAVE ANALYSIS		SYM □	CH 71	LEGEND PARAMETER VEL-3RT
OPEN CAP W LBDY 10-40-1-250 NO RLDS				
RUN 154 TP	6			



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBODY 10-40+1-256 NO BLOS  
 RUN 154 TP 7

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



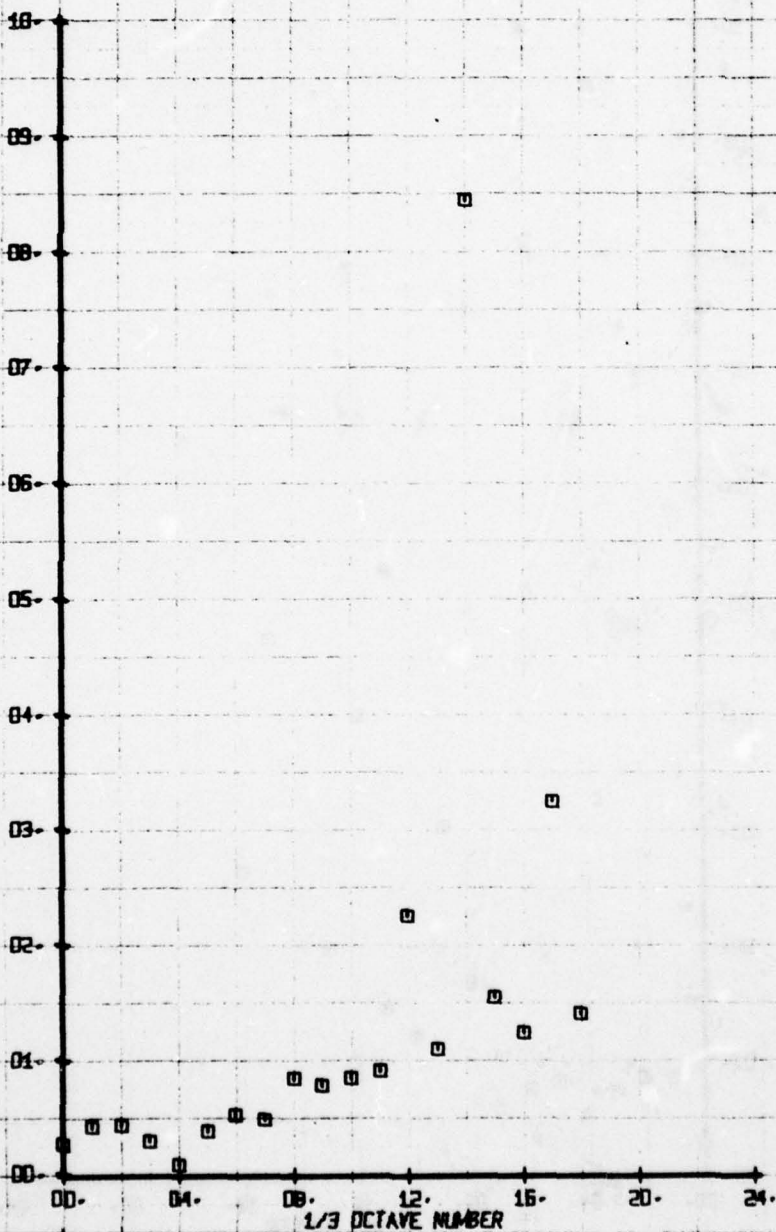
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W/ BODY 10-40-1-250 NO BLOS  
 RUN 154 TP 8

SYM  
 □

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS





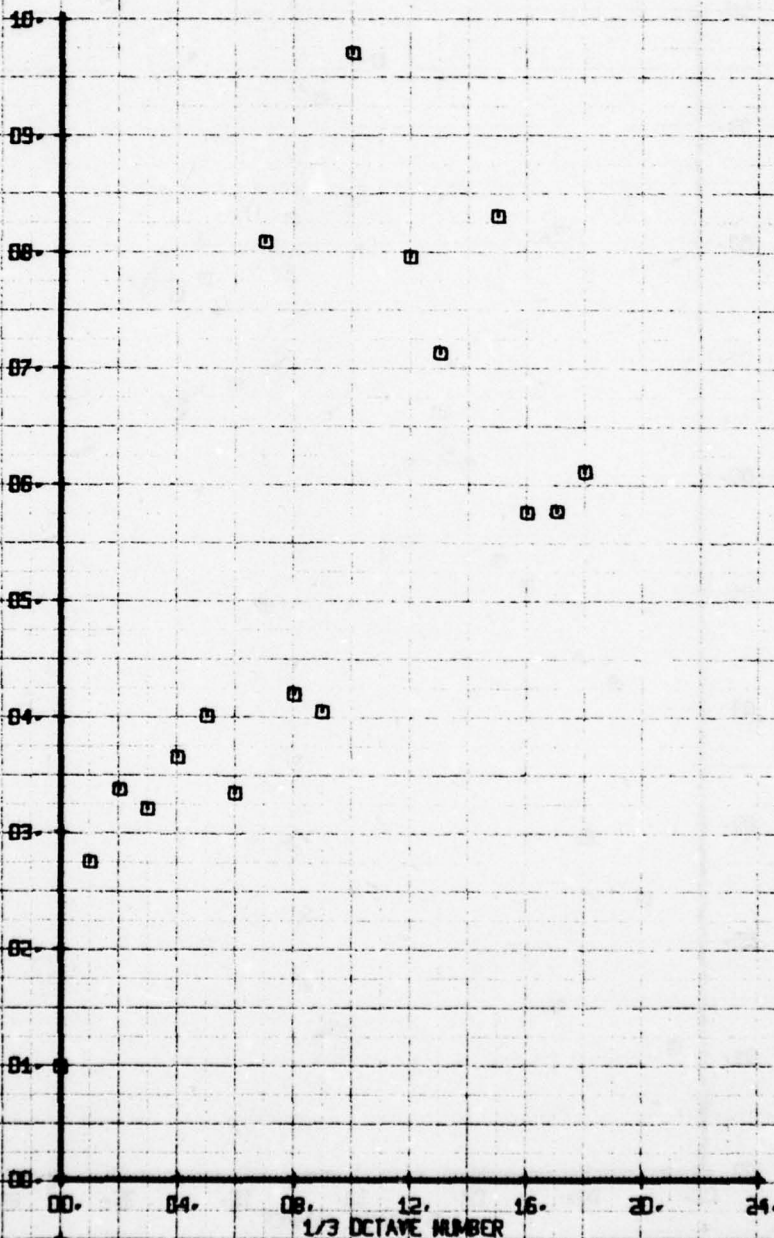
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LEROY 10-40-1-250 NO BLOS  
 RUN 154 TP 2

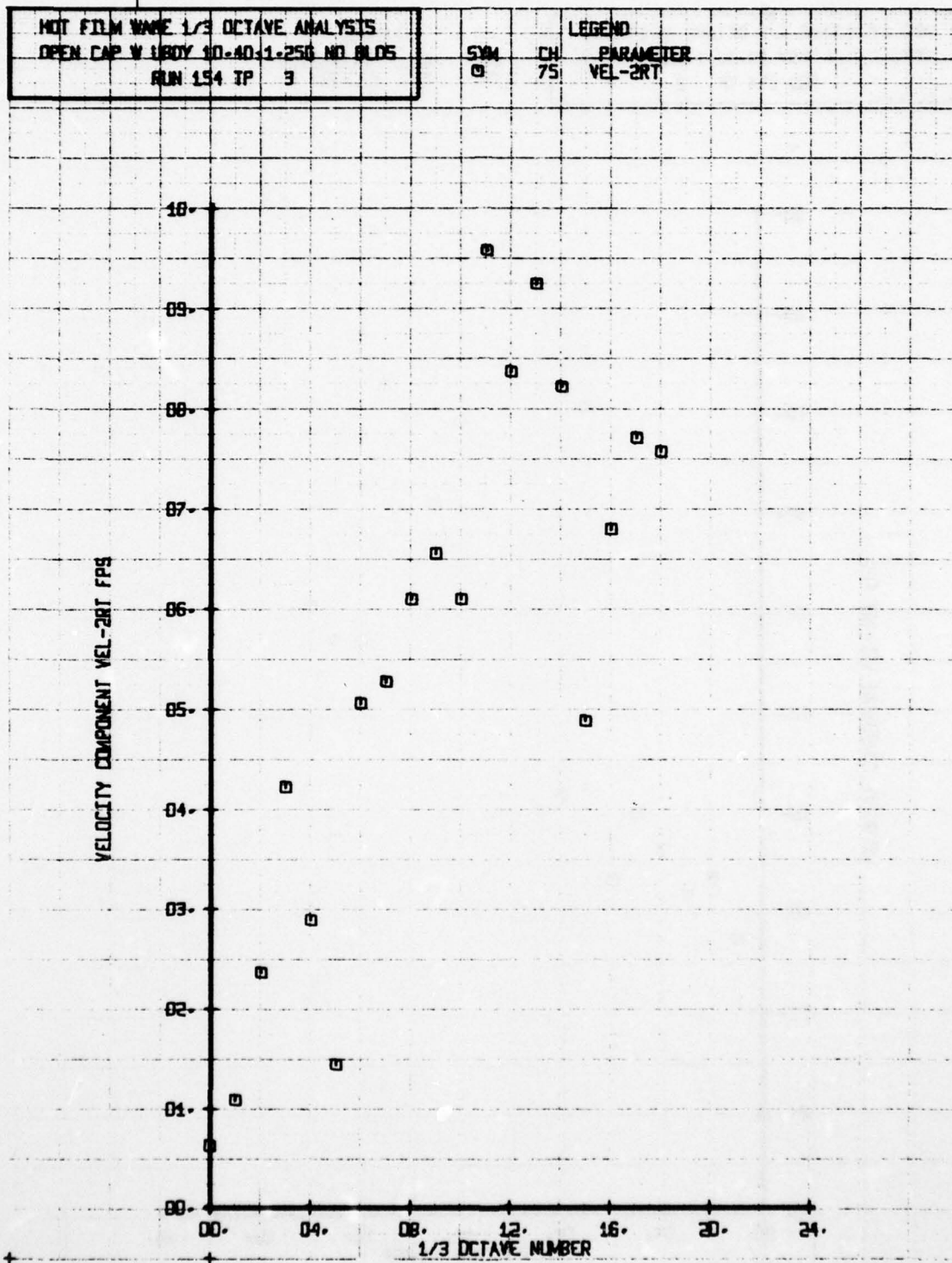
SYM  
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LEGEND

CH: 75  
 PARAMETER  
 VEL-2RT

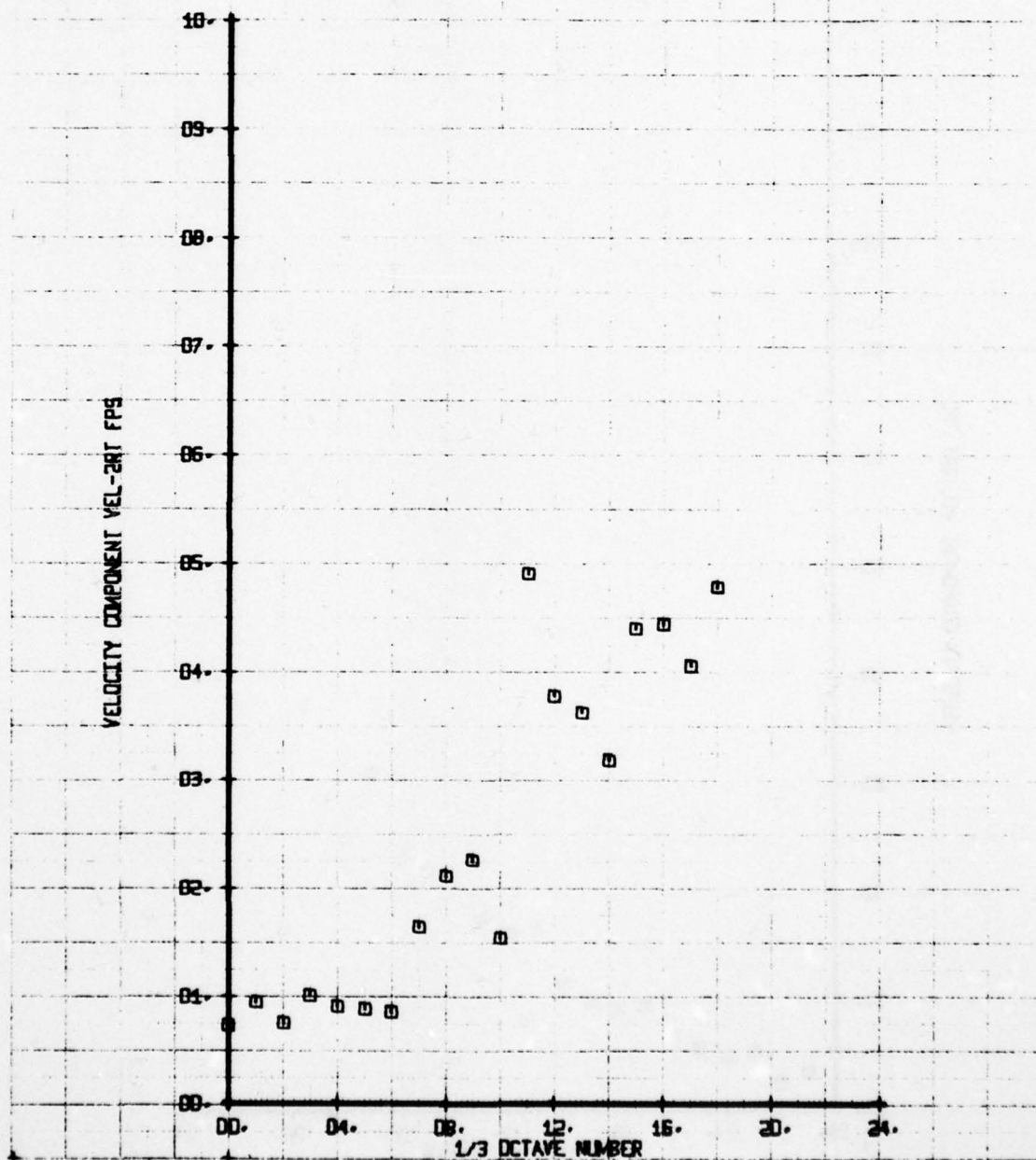
VELOCITY COMPONENT VEL-2RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LB0Y 10-40-1-25G NO BLDG  
 RUN 154 TP 4

LEGEND  
 CH PARAMETER  
 75 VEL-2RT

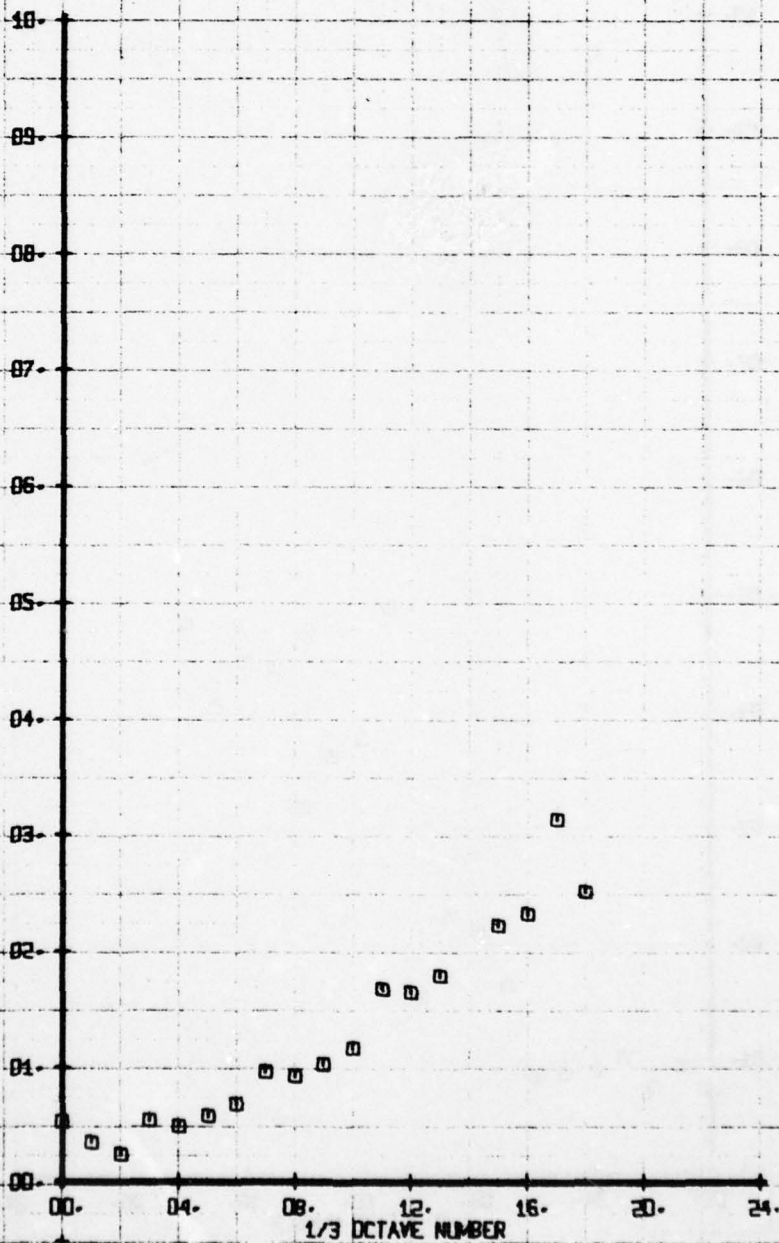




HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LEROY 10-40-1-250 NO BLDS  
 RUN 154 TP 5

LEGEND	
SYM	CH
□	75
PARAMETER	
VEL-2RT	

VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W UBOY 10-40-1-25G NO BLOS  
RUN 154 TP 6

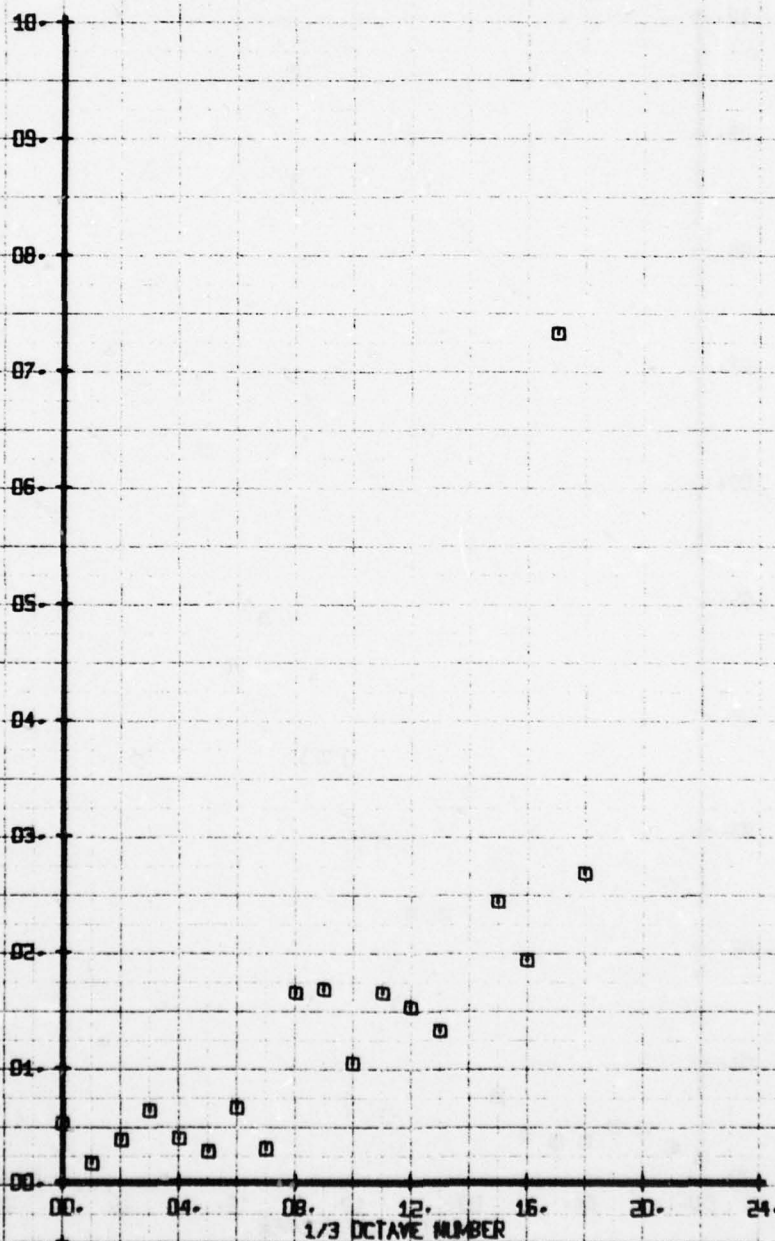
SYM  
□

LEGEND

CH  
75

PARAMETER  
VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



UNCLASSIFIED

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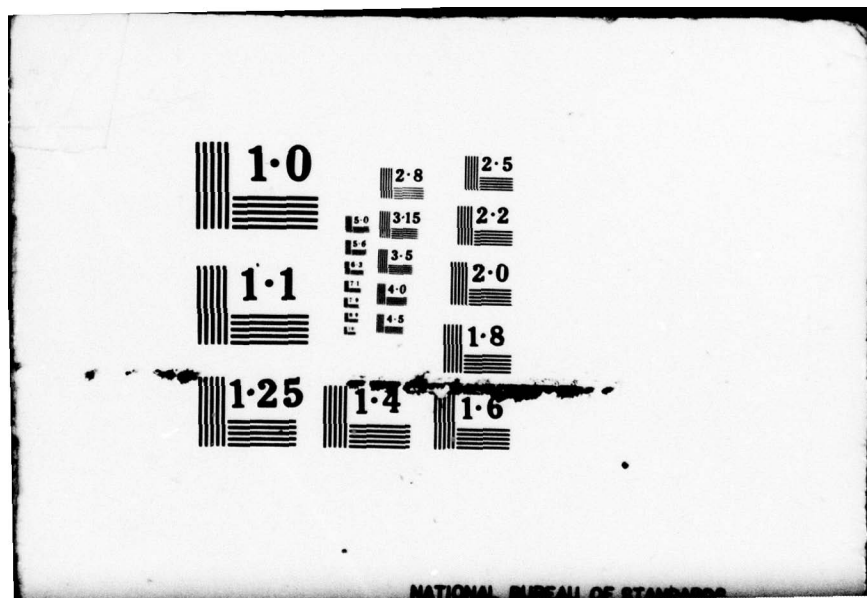
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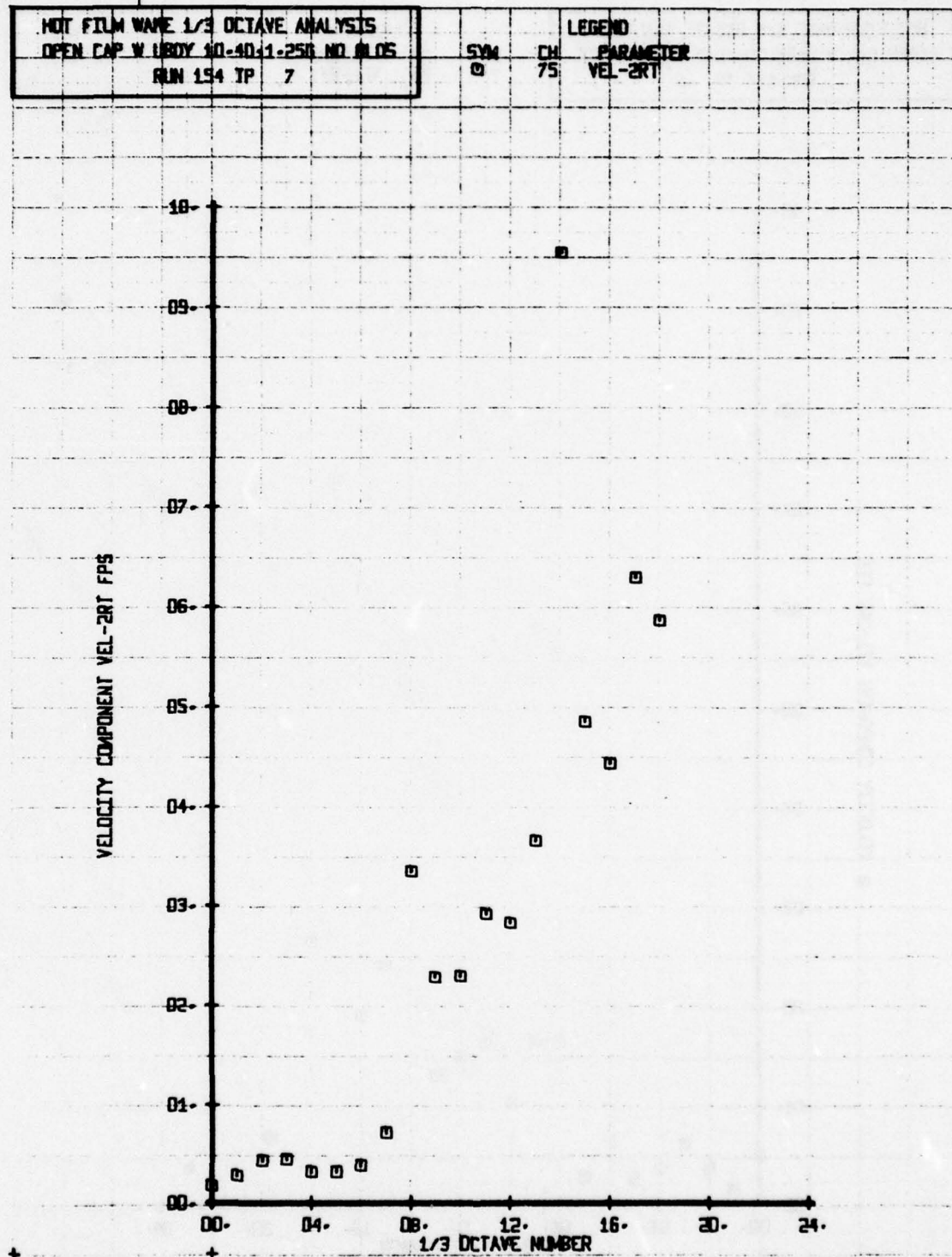
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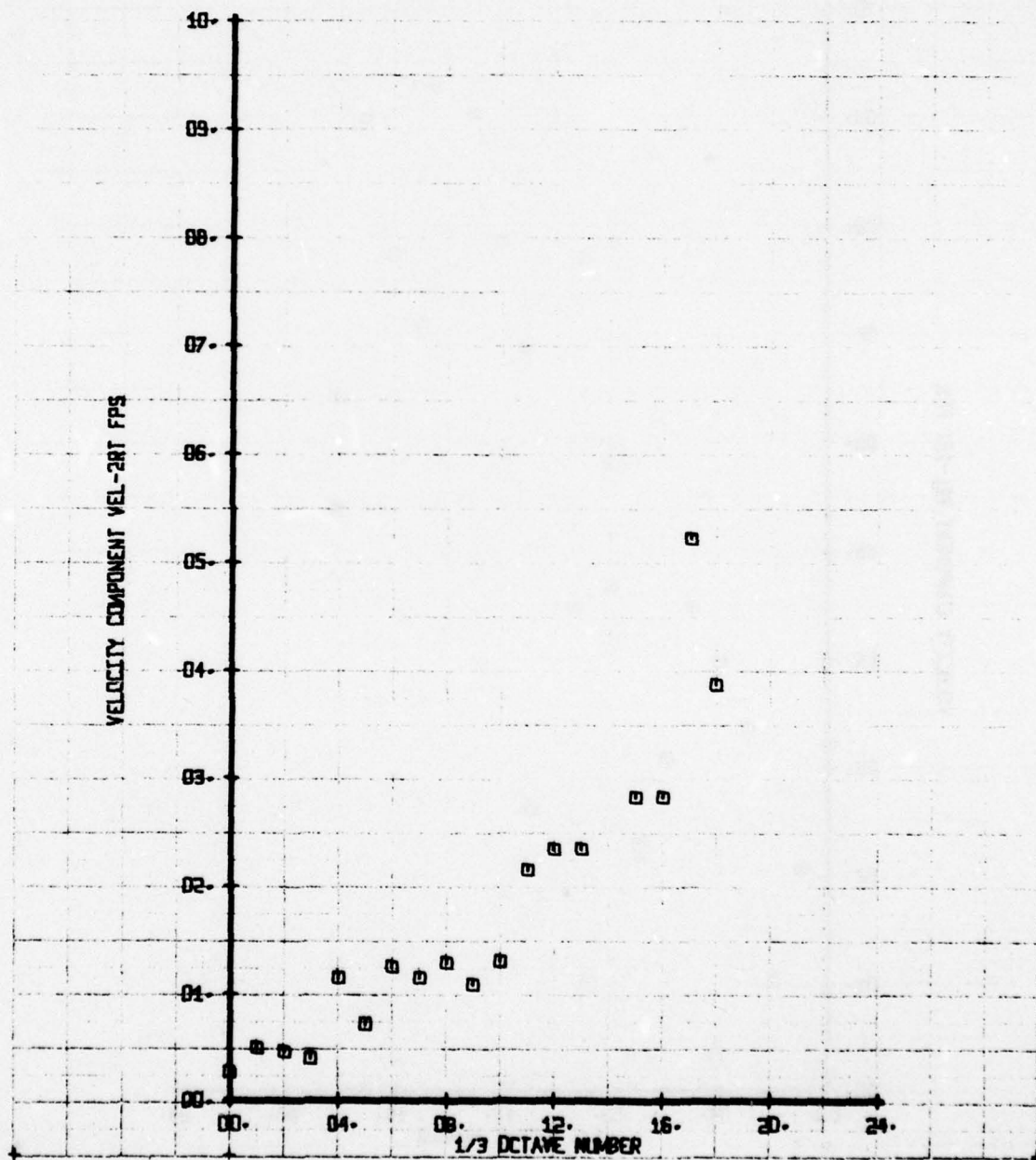
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LRDY 10-40-1-250 NO MLOS  
 RUN 154 TP 7

SYM	CH	PARAMETER
0	75	VEL-2RT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LIBBY 10-40, 1-25G NO BLOS  
 RUN 154 TP 8

LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT





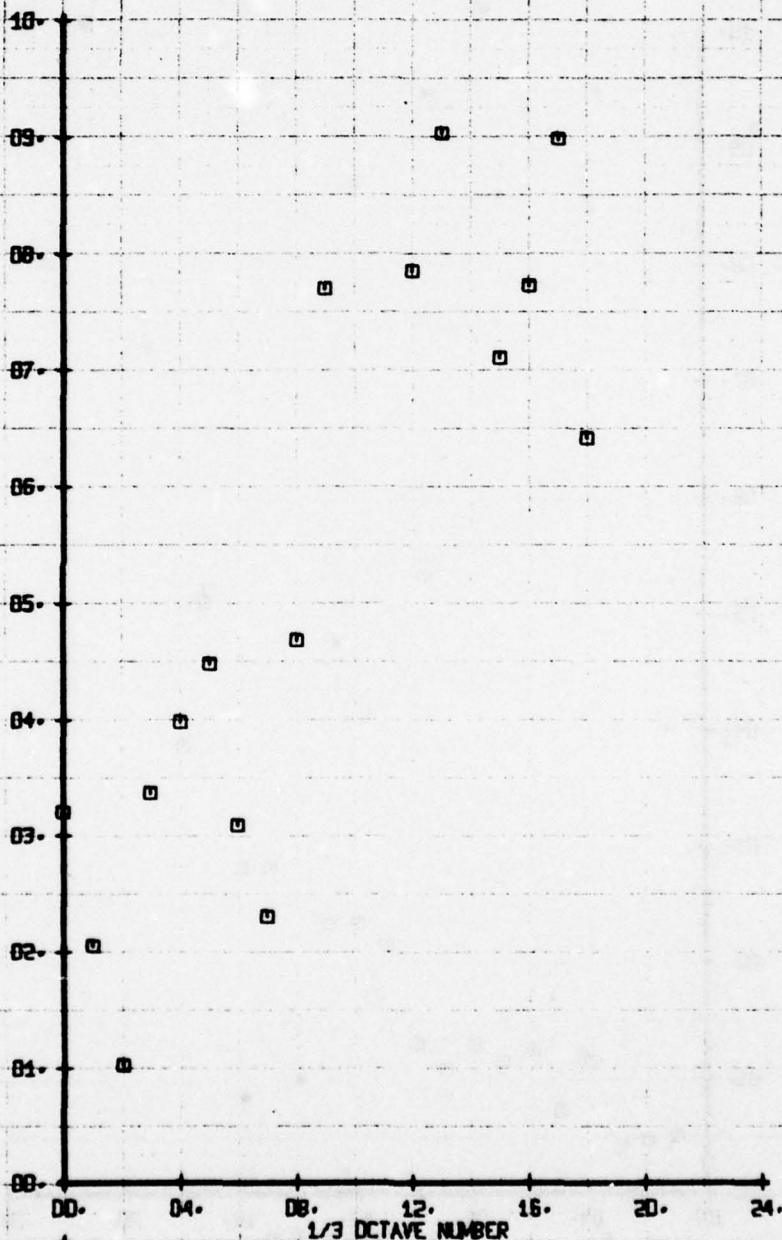
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LEROY 10-40-1-25G NO BLDS  
 RUN 154 TP 2

SYM  
 0

CH  
 74

LEGEND  
 PARAMETER  
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-40-1-250 NO BLOS  
 RUN 154 TP 3

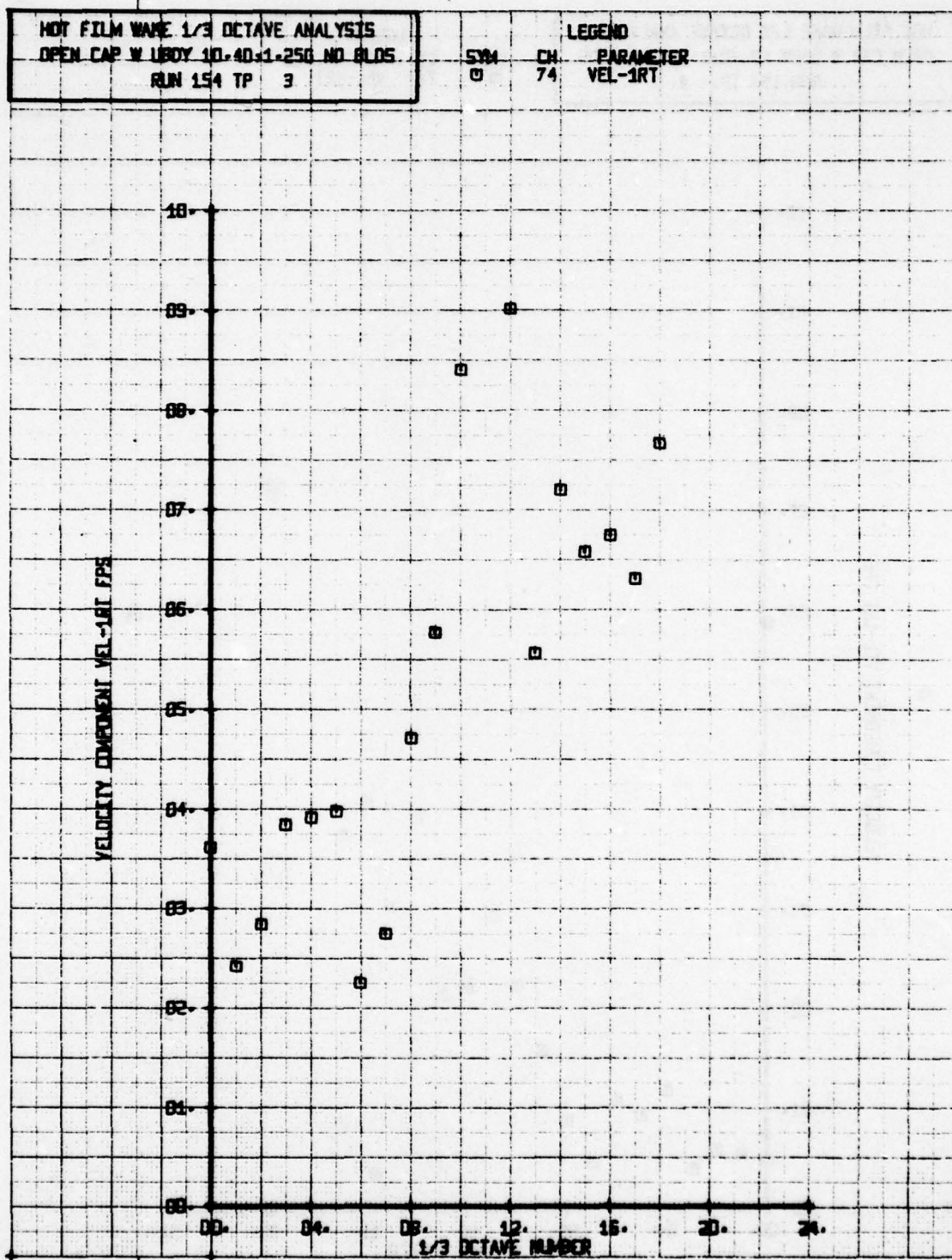
SYM  
 0

LEGEND

CH  
 74

PARAMETER  
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



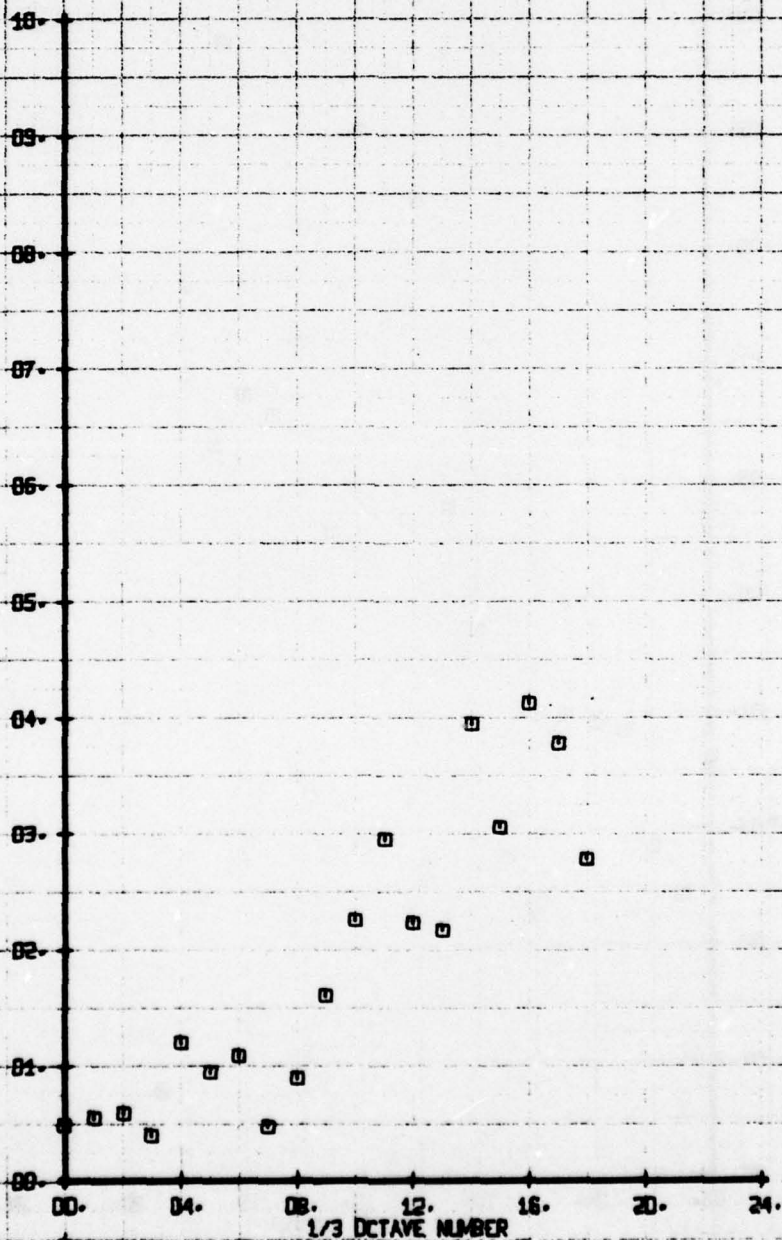
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W 180Y 10-40-1-250 NO BLDG  
 RUN 154 TP 4

SYM  
 0

CH  
 74

LEGEND  
 PARAMETER  
 VEL-1RT

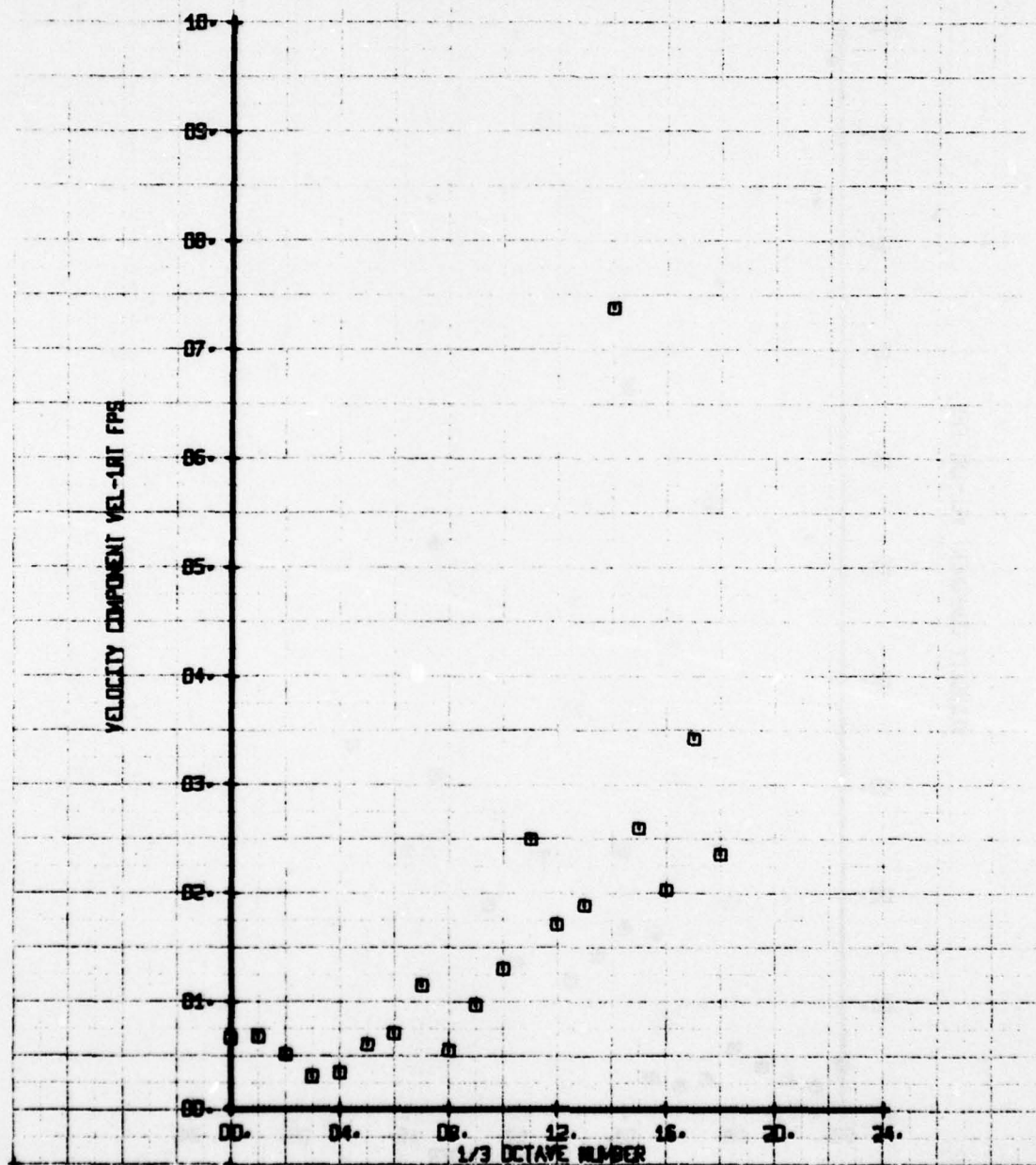
VELOCITY COMPONENT VEL-1RT FPS

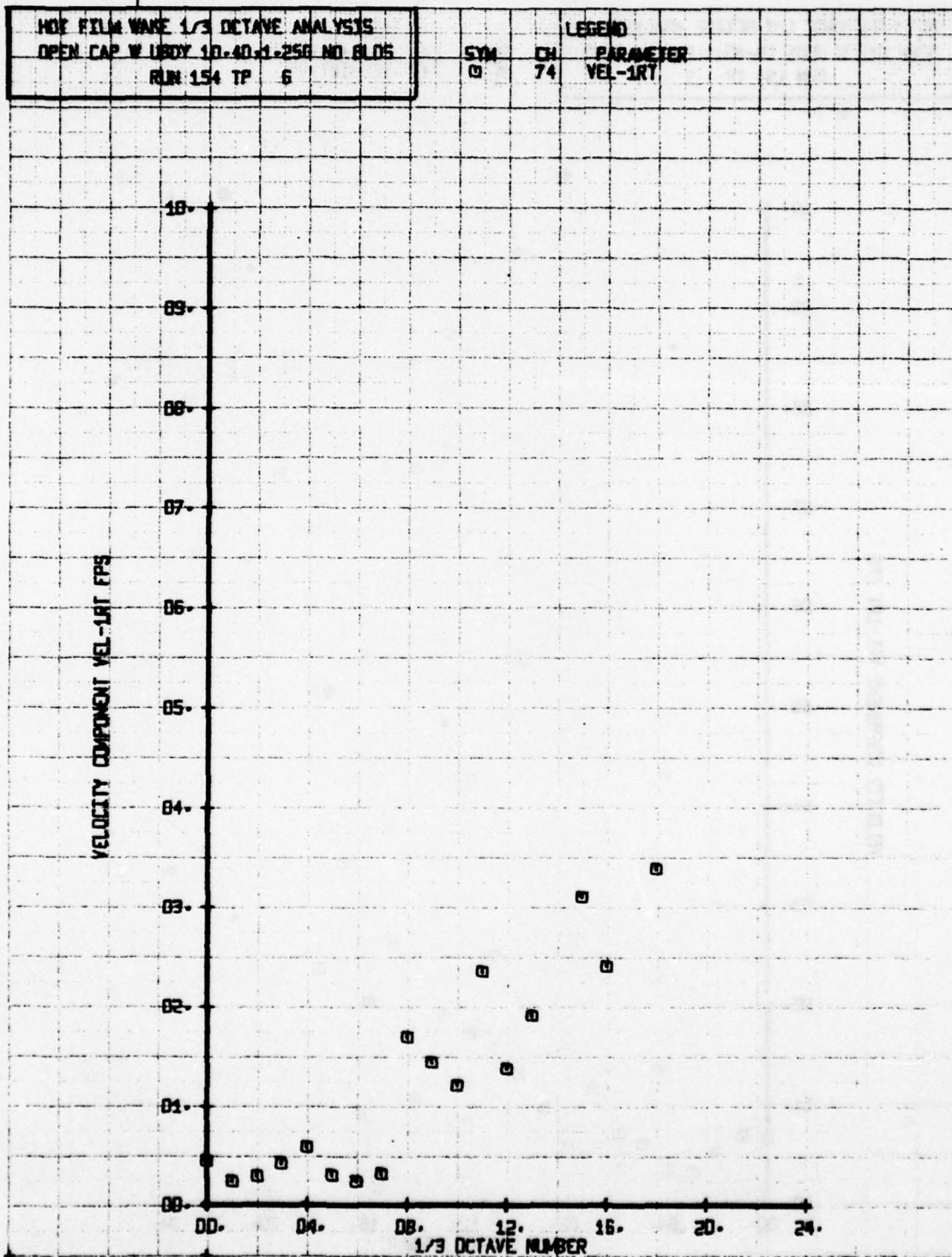


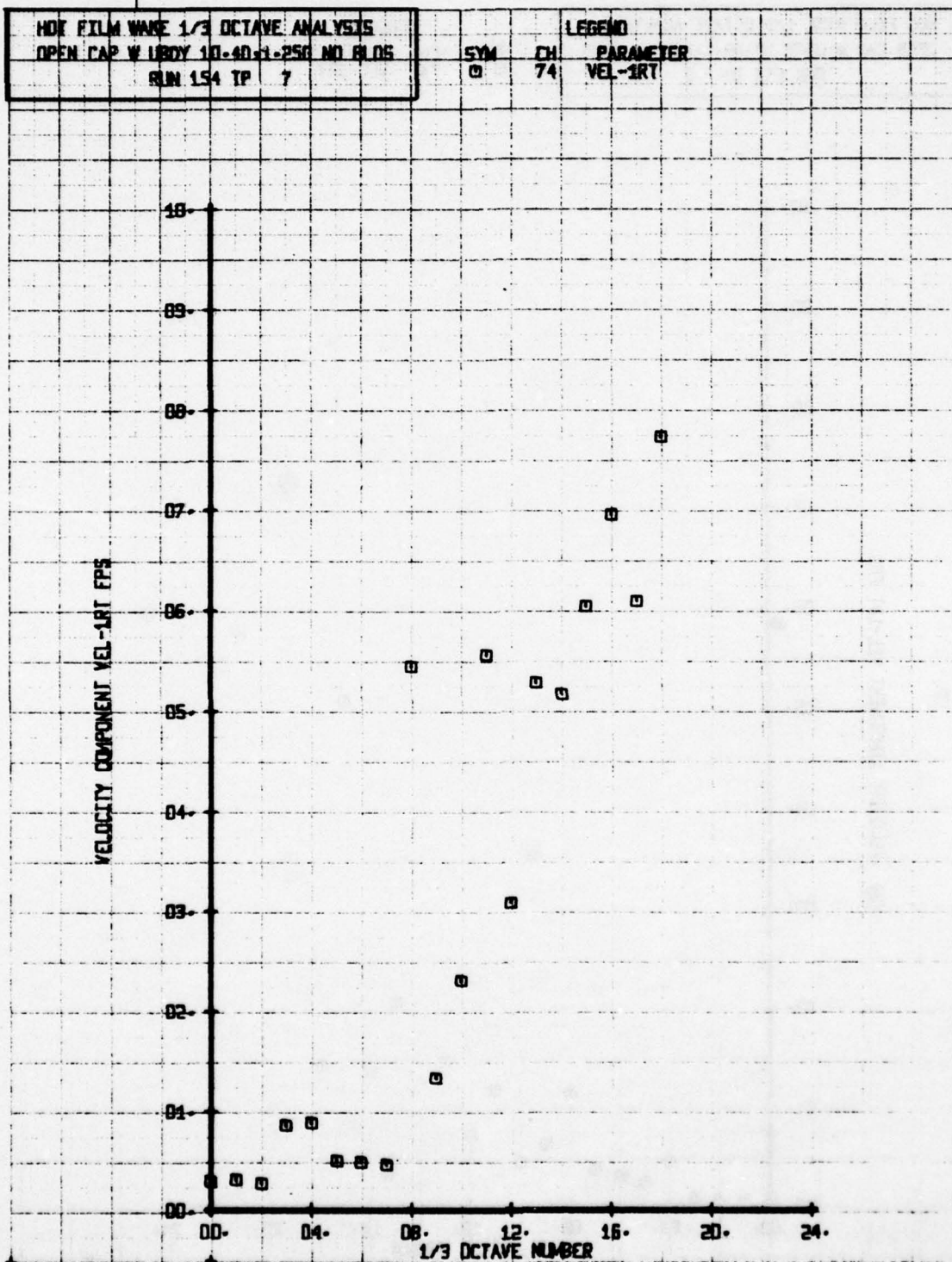


HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBOY 10-40:1-250 NO BLOS  
RUN 154 TP 5

LEGEND  
SYM CH PARAMETER  
□ 74 VEL-1RT



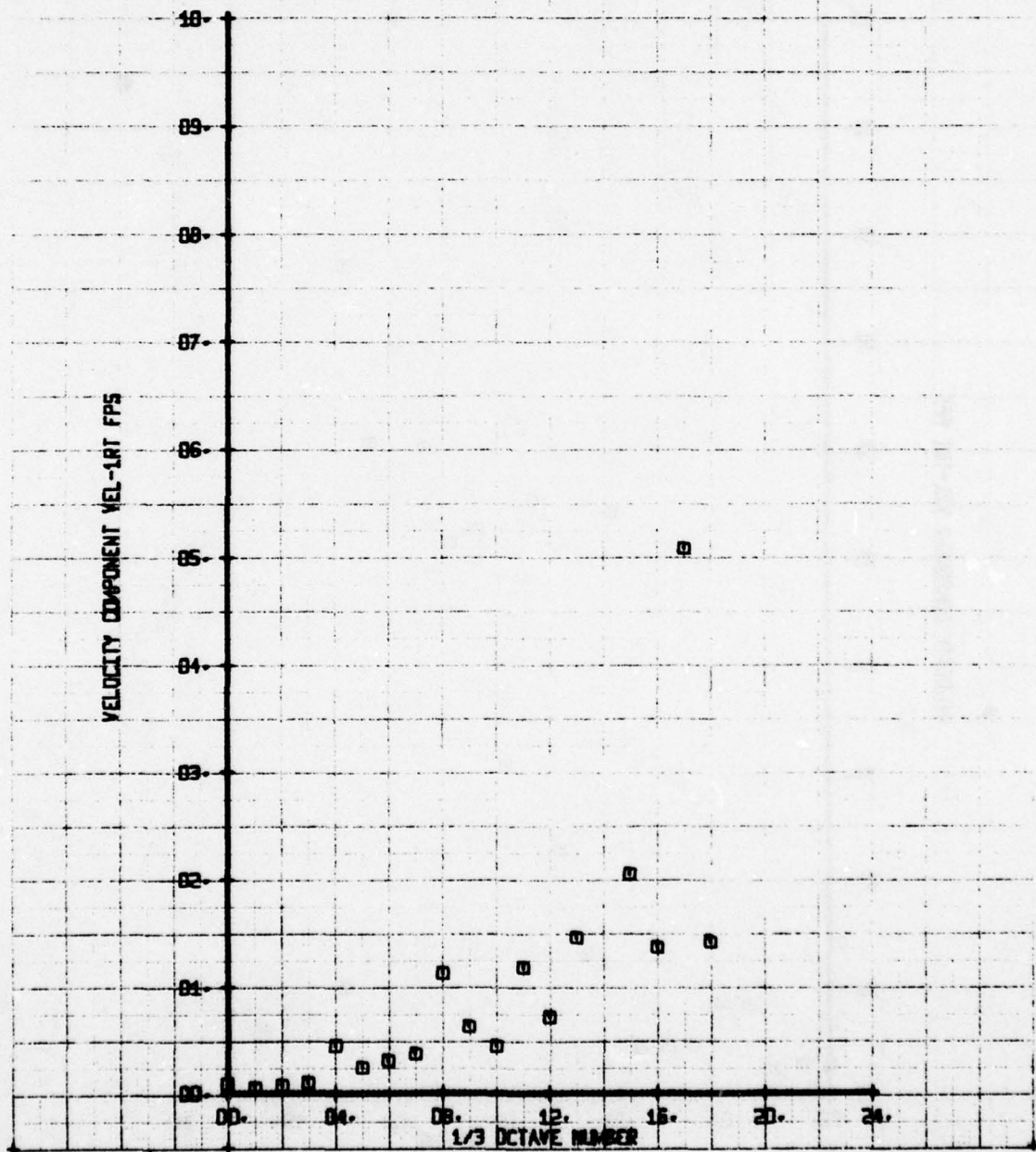






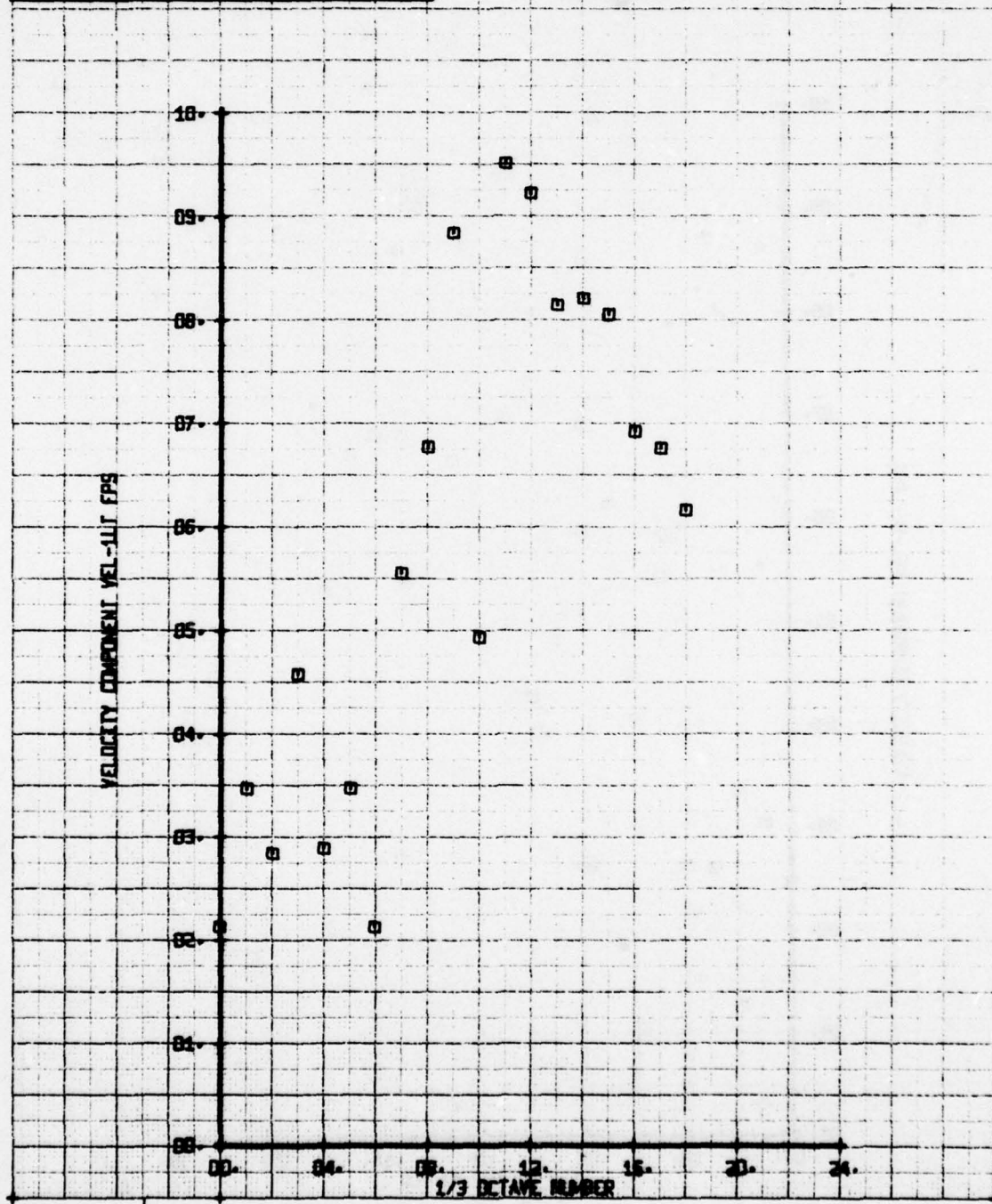
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W BODY 10-40, 1-250 NO BLOS  
 RUN 154 TP 8

LEGEND  
 SYM CH PARAMETER  
 O 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W 180Y 10-40-1.250 NO BLDS  
 RUN 154 TP 2

SYN CH PARAMETER  
 0 73 VEL-1LT



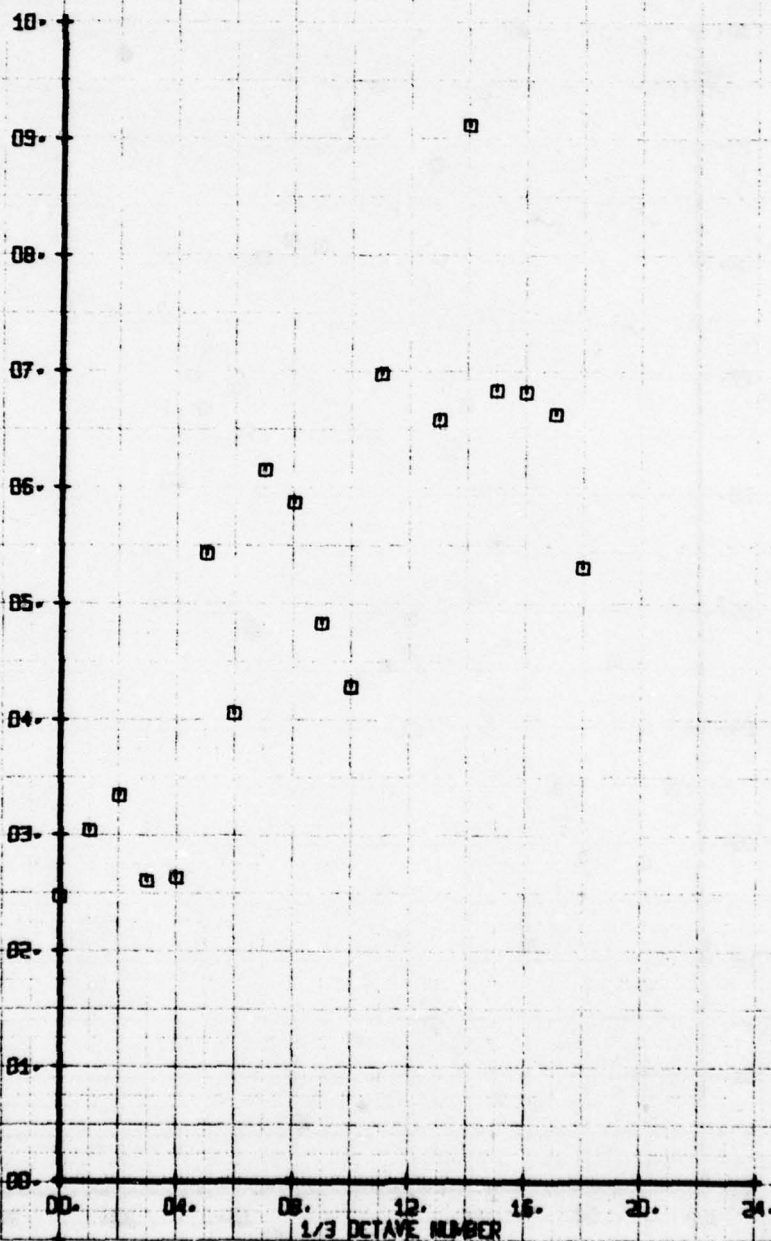
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 10.40:1.250 NO BLOS  
 RUN 154 TP 3

SYM  
 0

CH  
 73

LEGEND  
 PARAMETER  
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



1/3 OCTAVE NUMBER

300



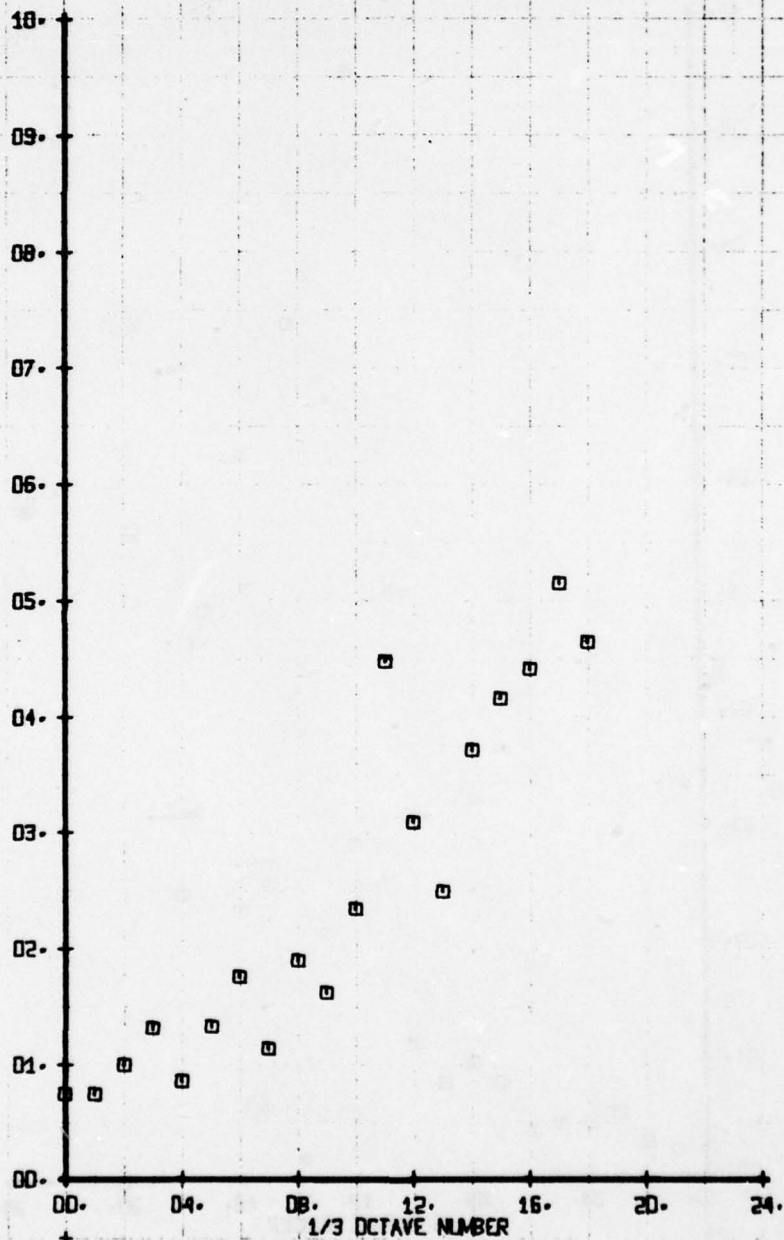
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBOY 10.40-1.250 NO BLOS  
RUN 154 TP 4

SYM  
□

CH  
73

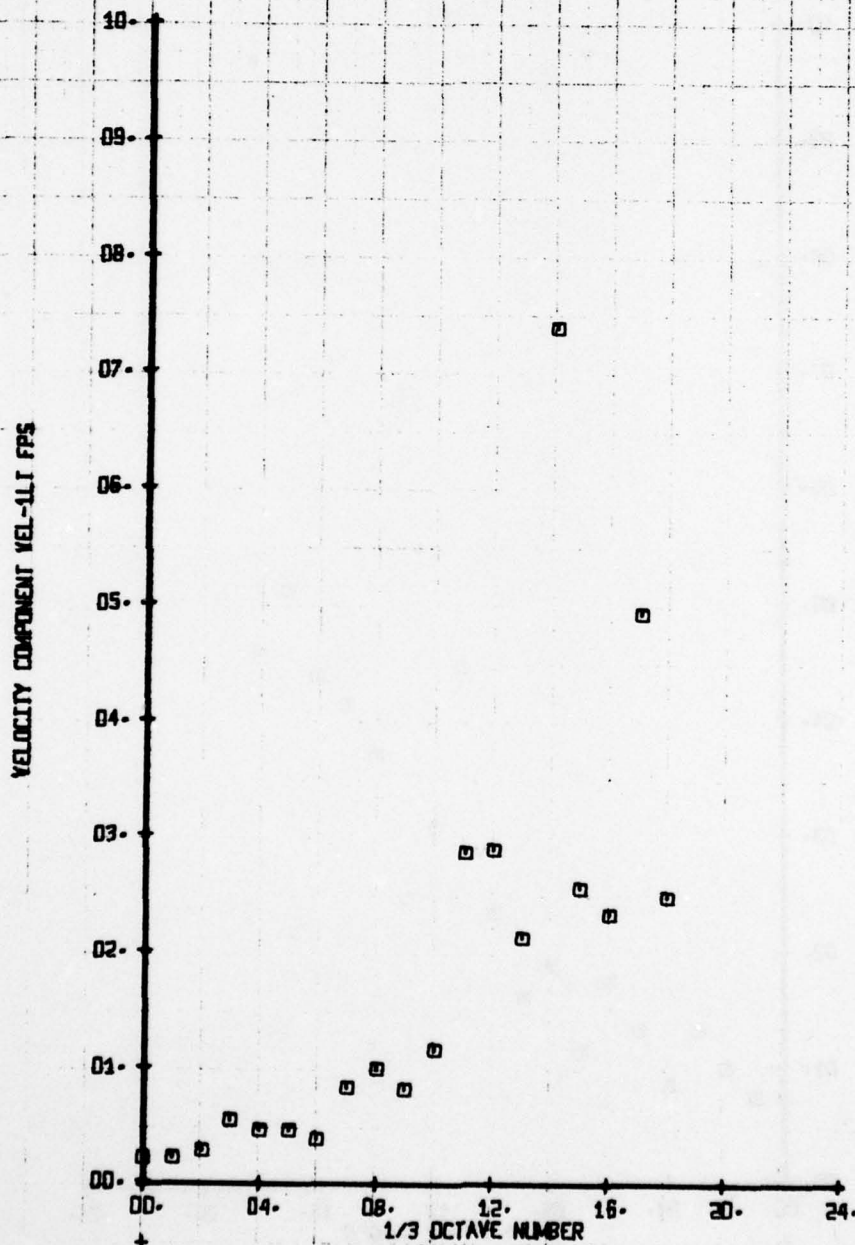
LEGEND  
PARAMETER  
VEL-ILT

VELOCITY COMPONENT VEL-ILT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-40, 1-250 NO 10.05  
 RUN 154 TP 5

SYM	CH	PARAMETER
□	73	VEL-1LT

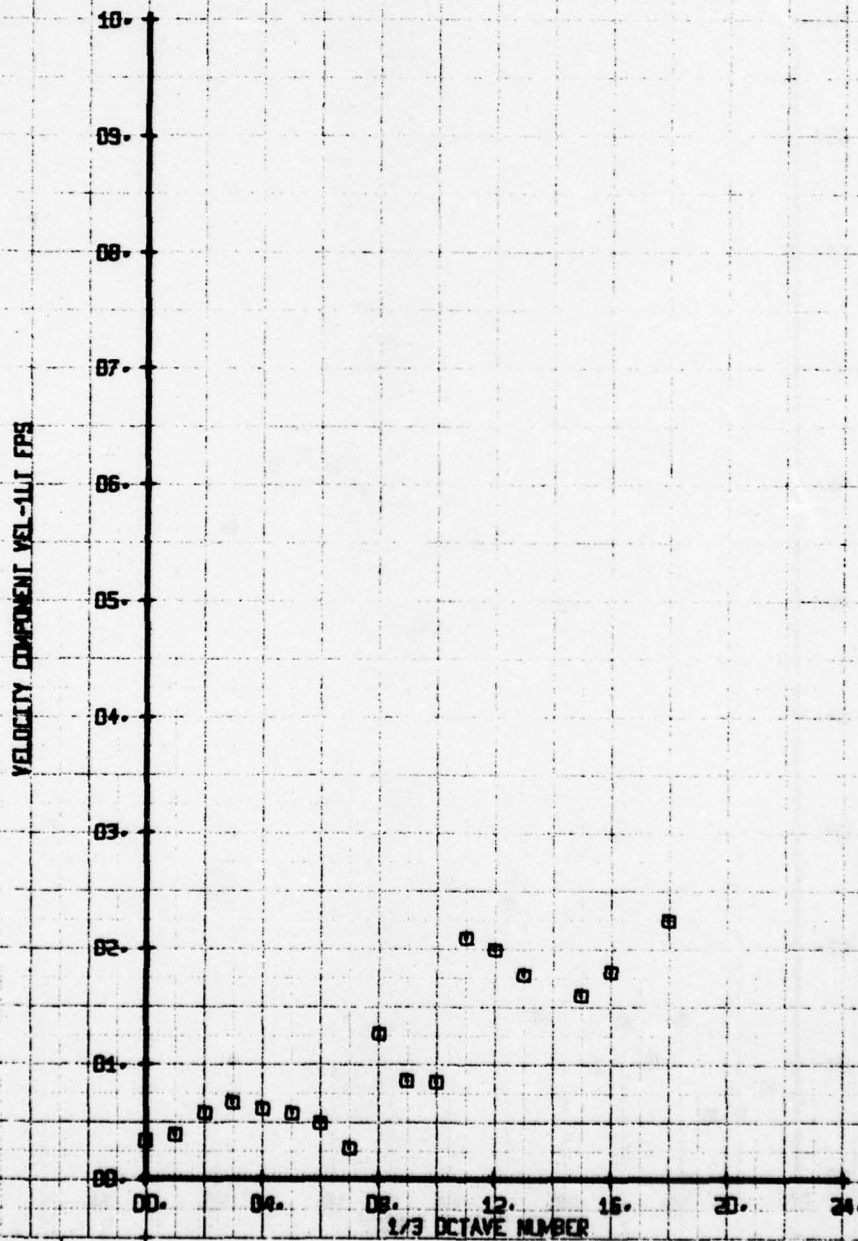


HOT FILM WARE 1/3 OCTAVE ANALYSIS  
OPEN CAP W UBOY 10-40-1-250 NO BLOS  
RUN 154 TP 6

SYM  
0

CH  
73

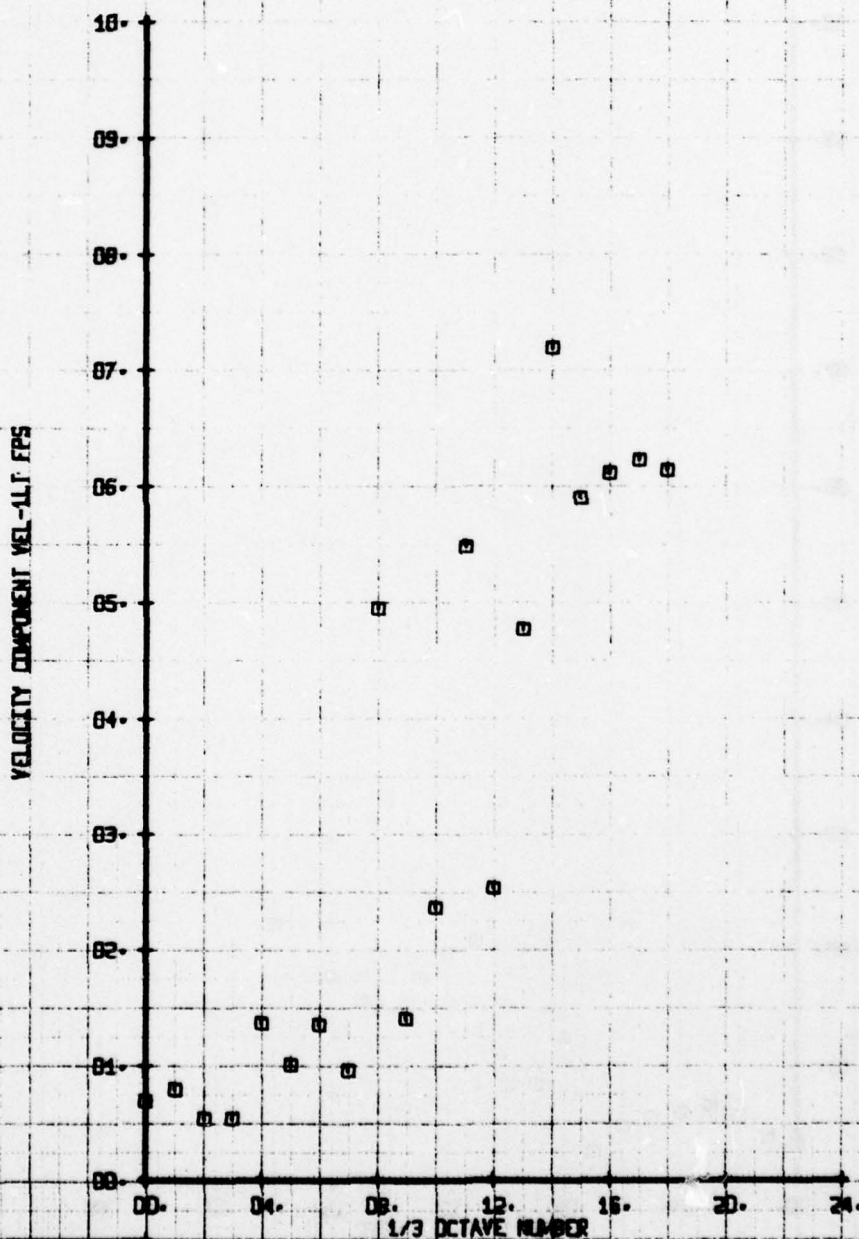
LEGEND  
PARAMETER  
VEL-1LT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40:1-250 NO 8LOS  
 RUN 154 TP 7

SYN CH PARAMETER  
 0 73 VEL-1LT

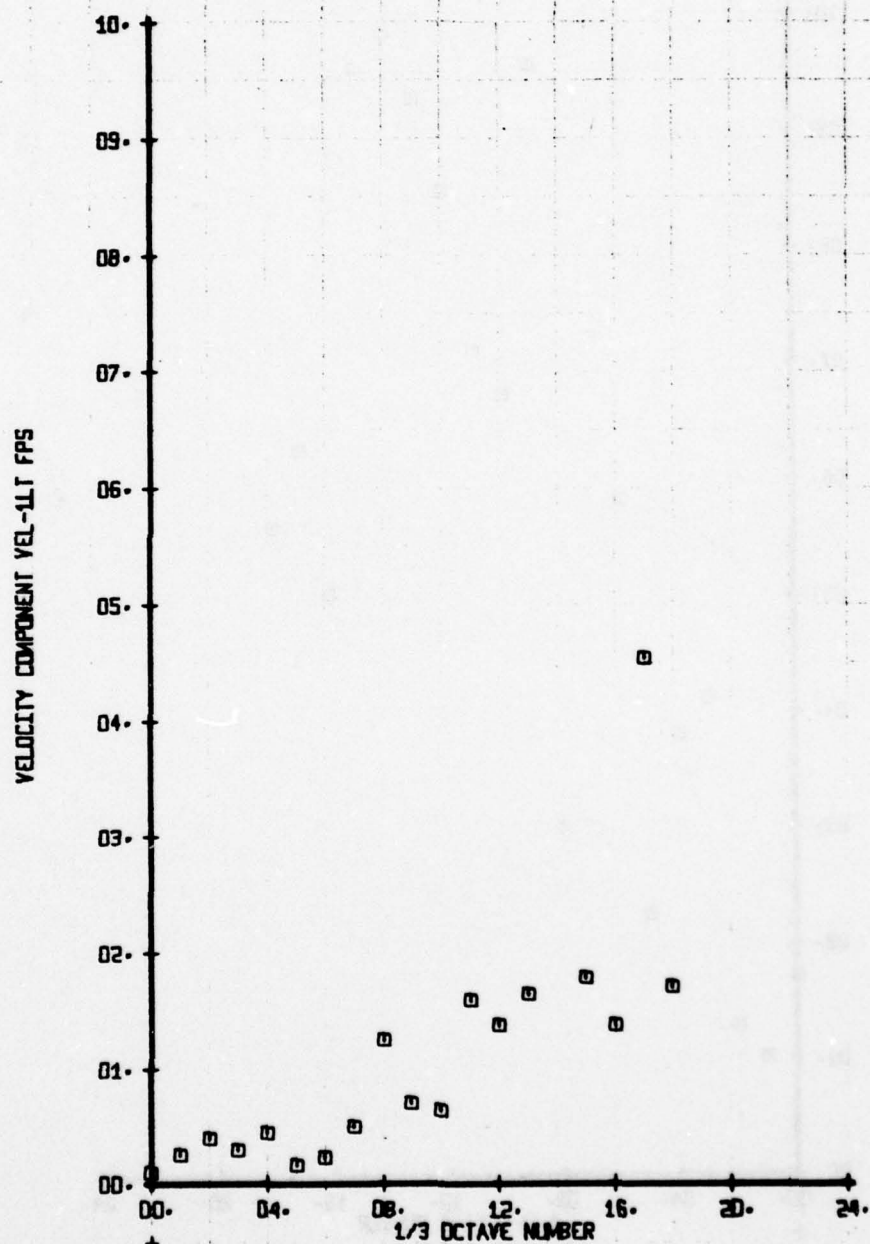


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LEROY 10-40-1-25G NO BLOS  
RUN 154 TP 8

SYM  
□

CH  
73

LEGEND  
PARAMETER  
VEL-1LT



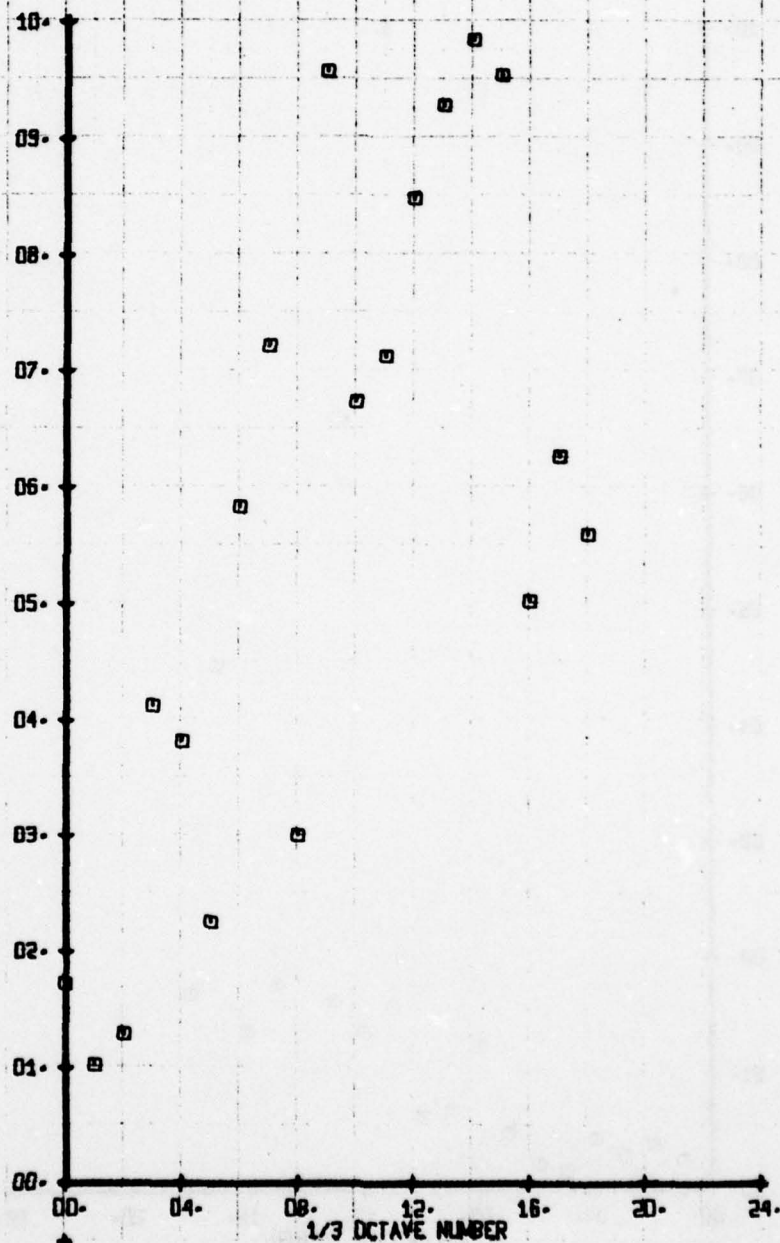
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W UBOY 10-40:1-250 NO BLOS  
RUN 154 TP 2

SYM  
□

CH  
72

LEGEND  
PARAMETER  
VEL-ZLT

VELOCITY COMPONENT VEL-ZLT FPS

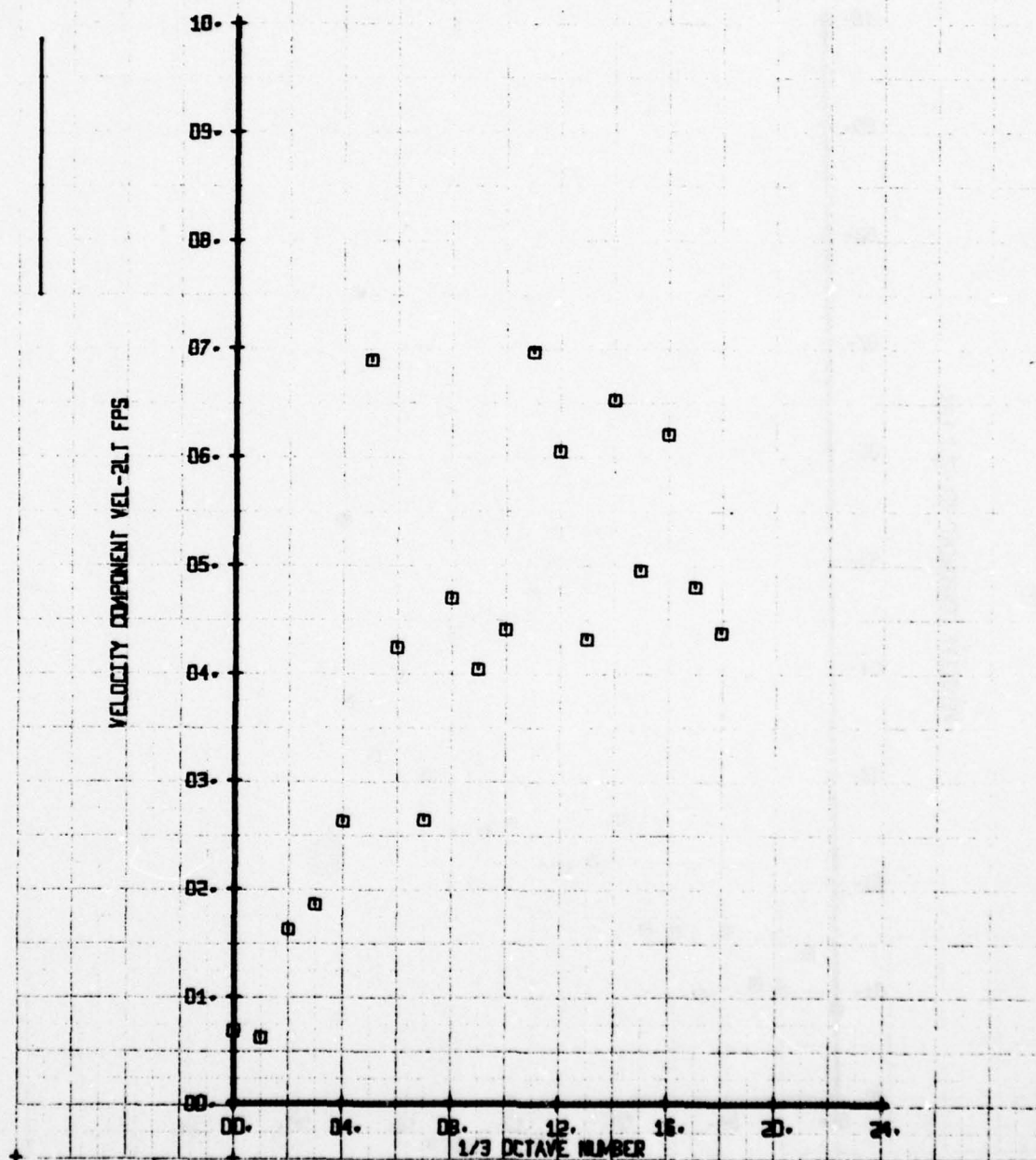


1/3 OCTAVE NUMBER



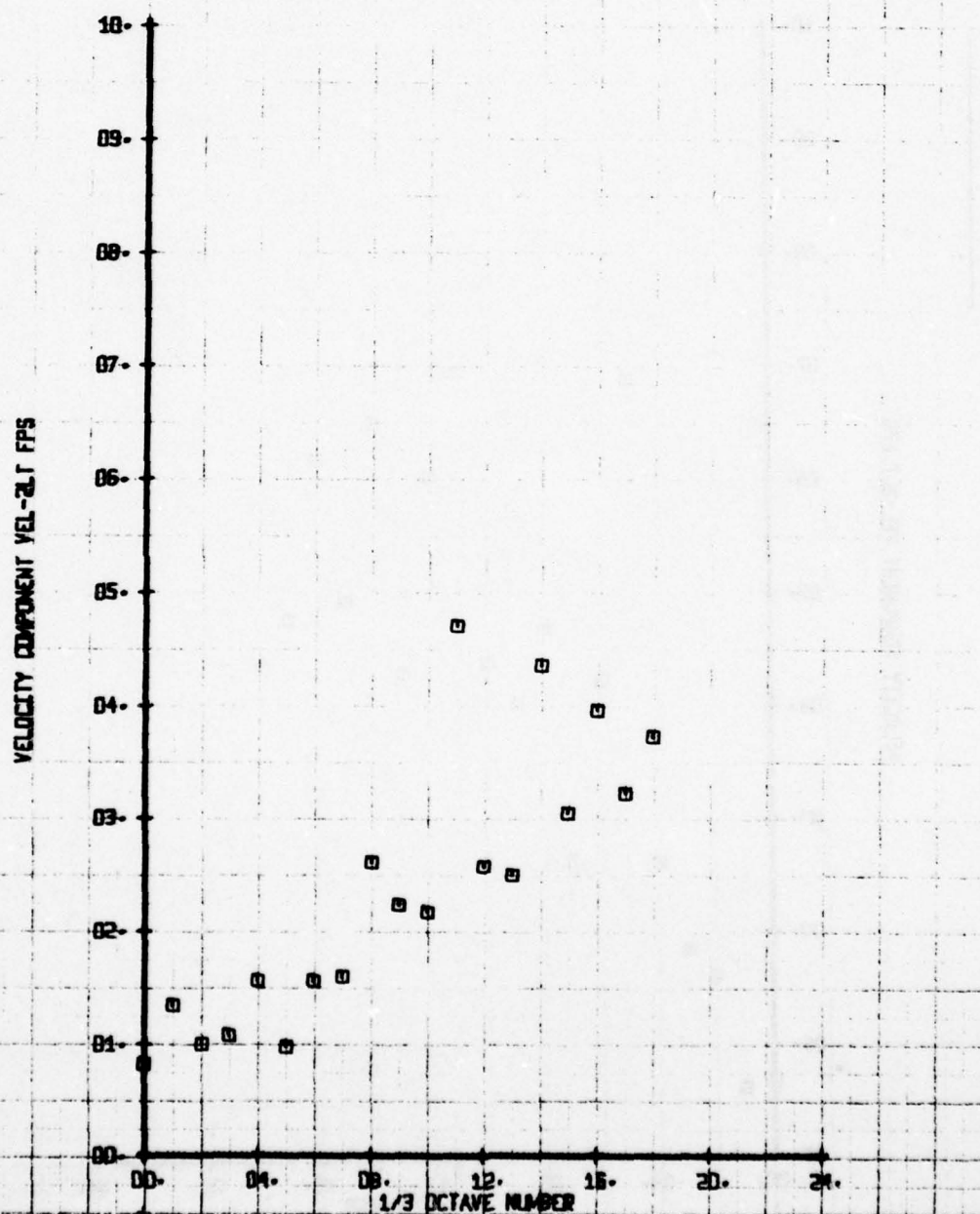
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBDY 10-40, 1-250 NO BLOS  
RUN 154 TP 3

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBDY 10-40, 1-25G NO BLOS  
 RUN 154 TP 4

LEGEND  
 SYM CH PARAMETER  
 0 72 VEL-2LT



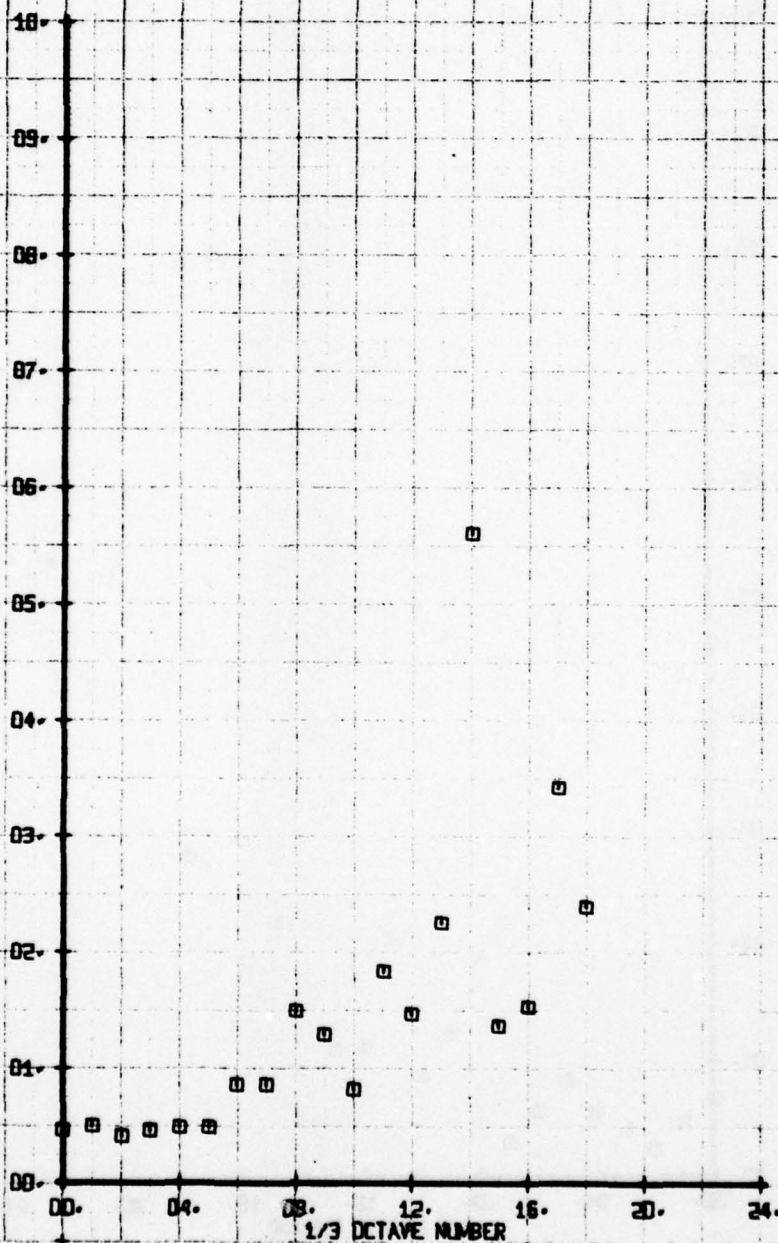
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LEROY 10-40-1.250 NO 8105  
 RUN 154 TP 5

SYM  
 □

CH  
 72

LEGEND  
 PARAMETER  
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS





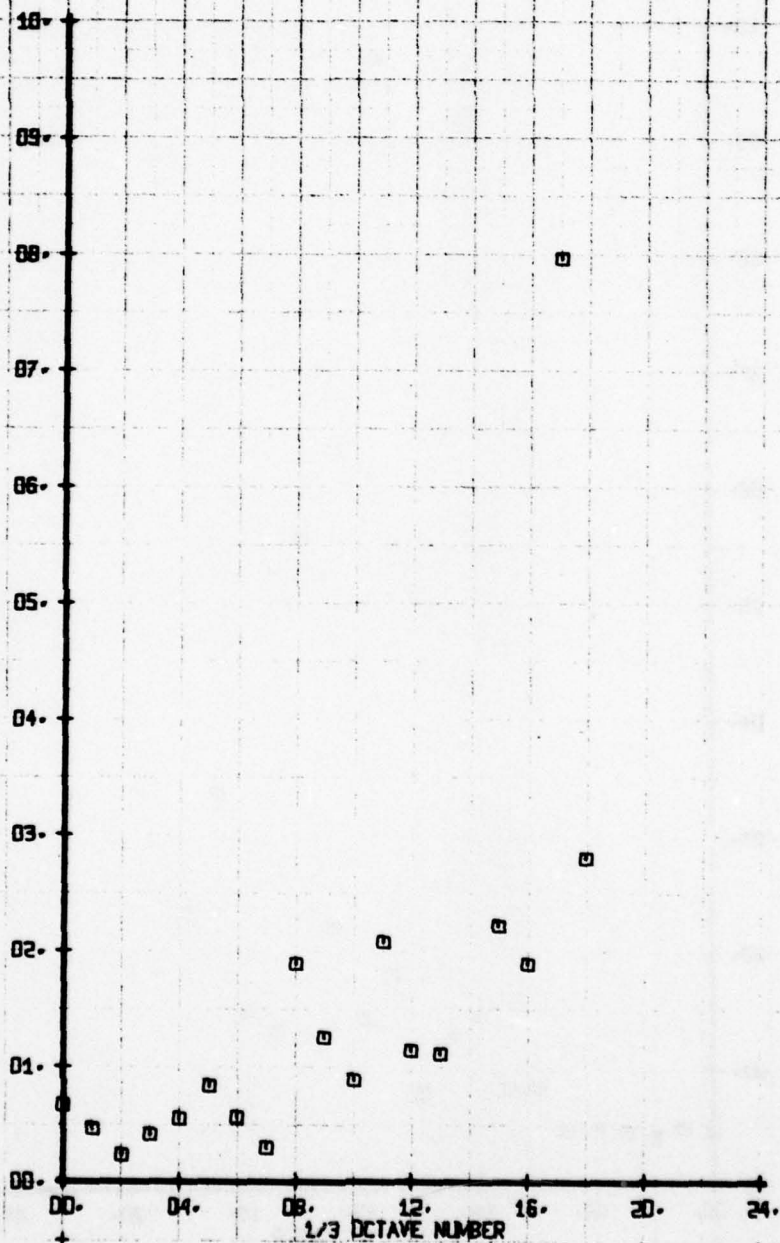
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LIBBY 10-40-1-250 NO BLDS  
RUN 154 TP 6

SYM  
□

CH  
72

LEGEND  
PARAMETER  
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

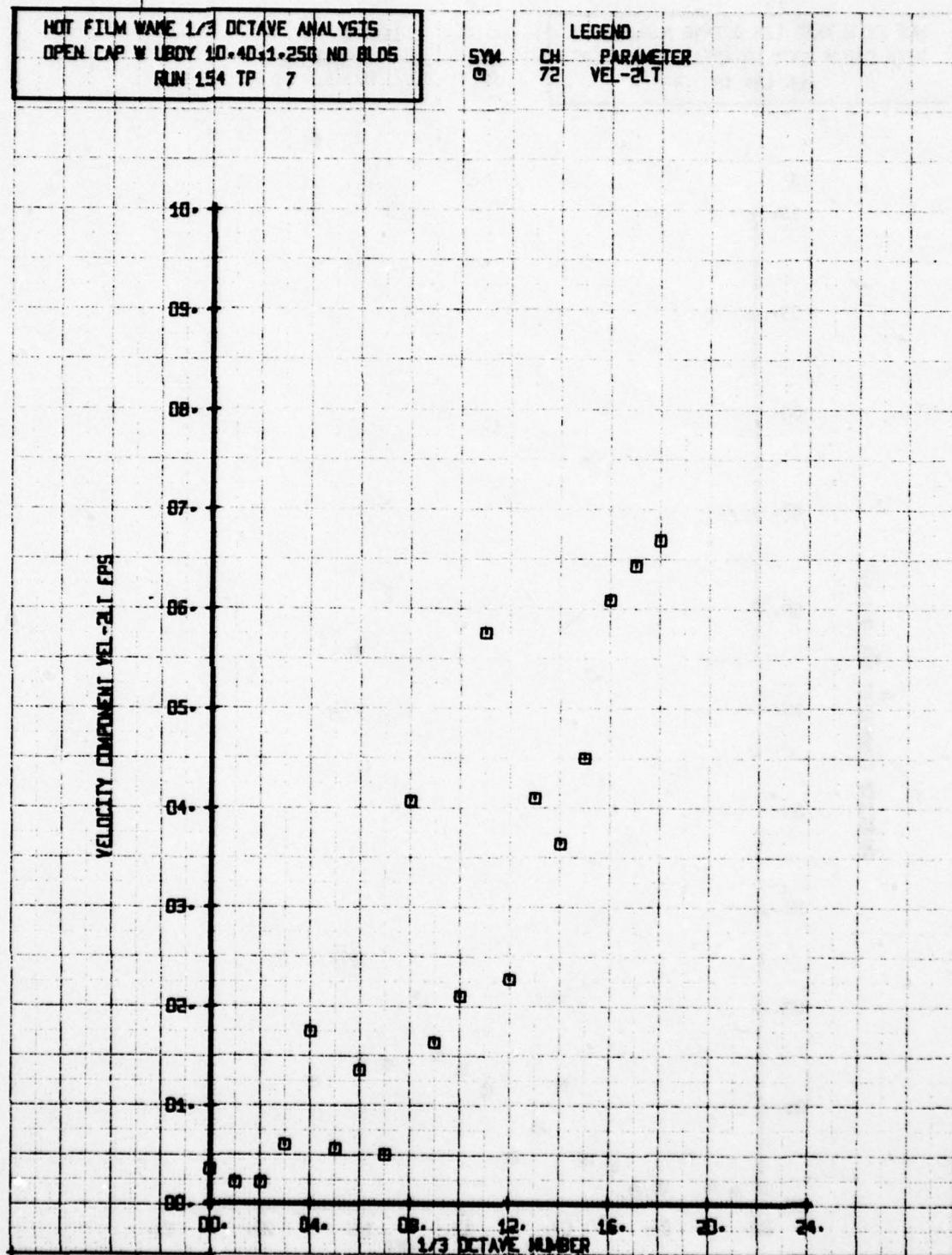


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LEROY 10.40-1.25G NO BLOS  
RUN 154 TP 7

SYM  
□

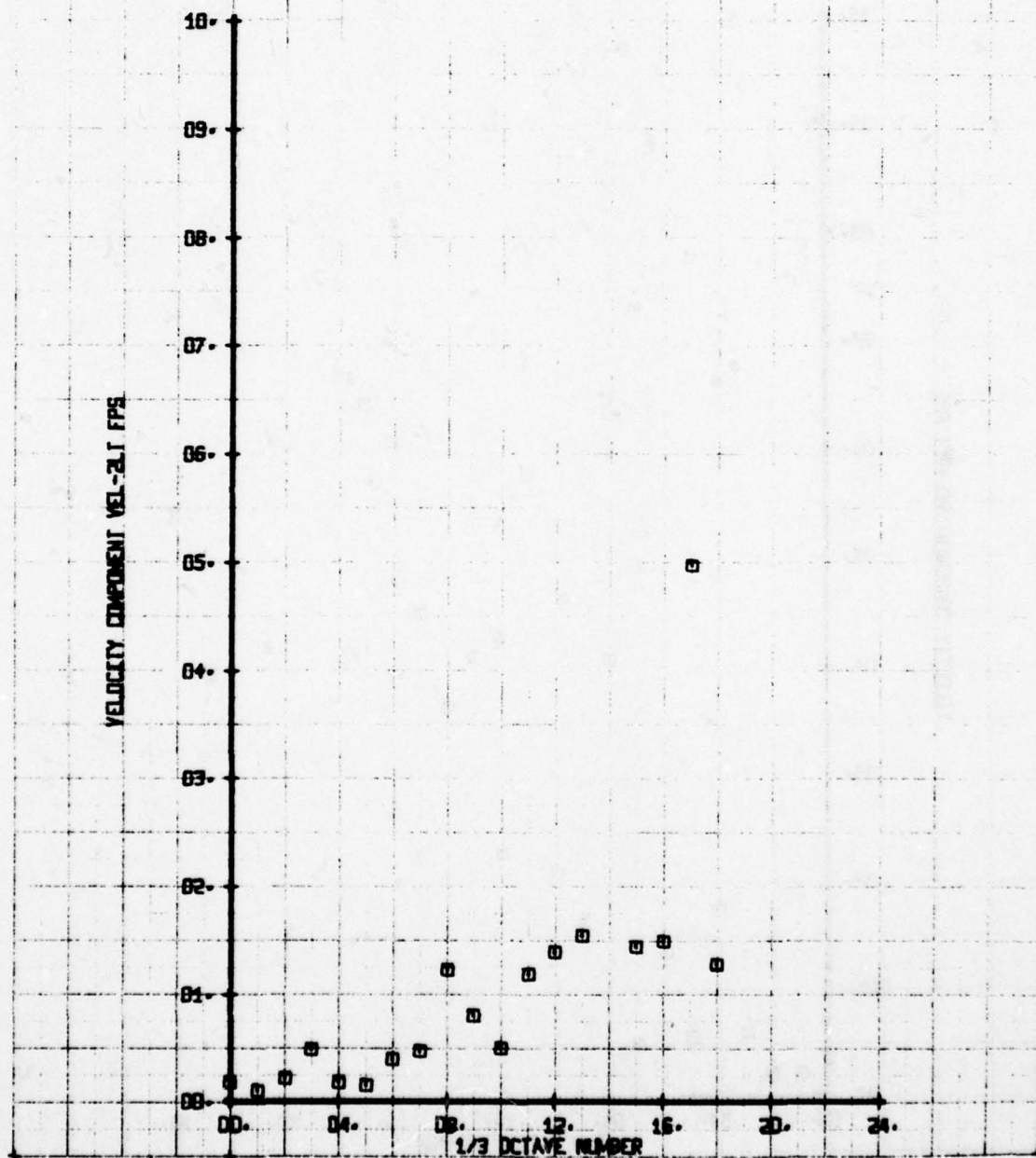
CH  
72

LEGEND  
PARAMETER  
VEL-2LT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LBOY 10-40-1-250 NO BLDS  
RUN 154 TP 8

LEGEND  
SYM CH PARAMETER  
□ 72 VEL-2LT



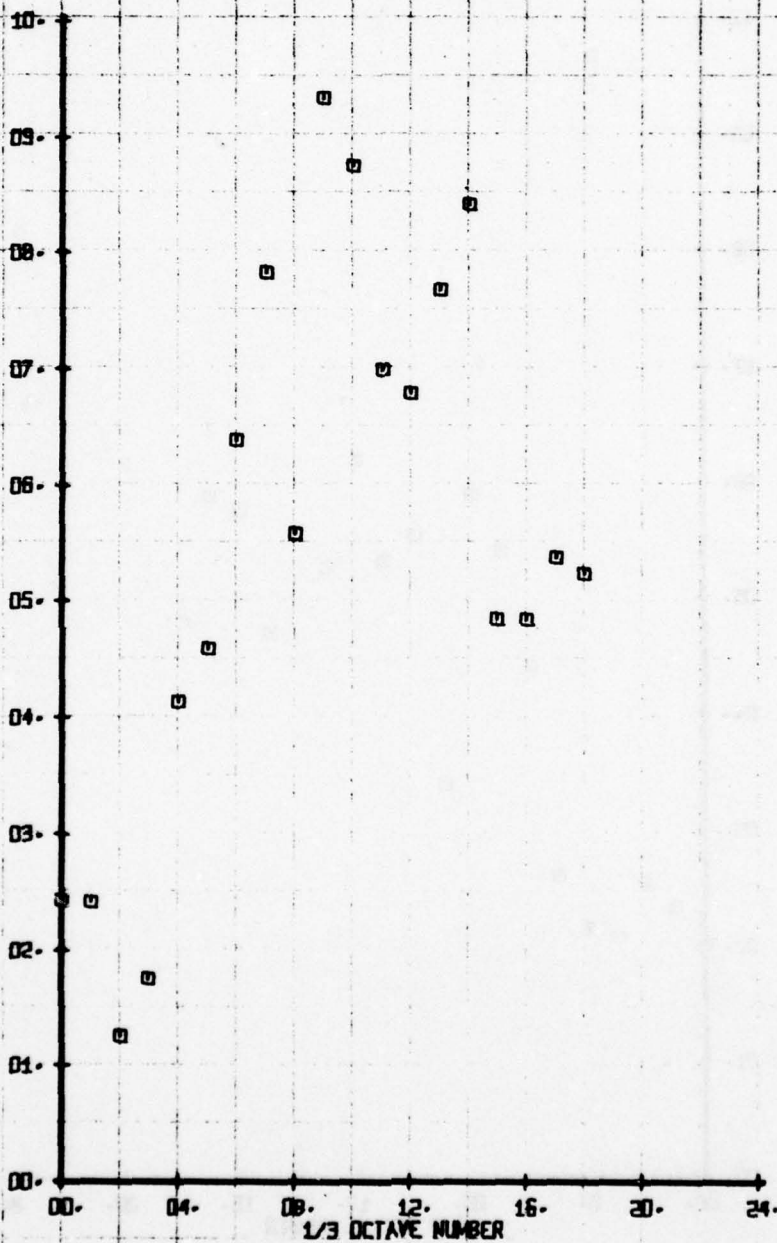


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40-1-250 NO. 0105  
 RUN 154 TP 2

SYM  
 □

LEGEND  
 CH 70  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



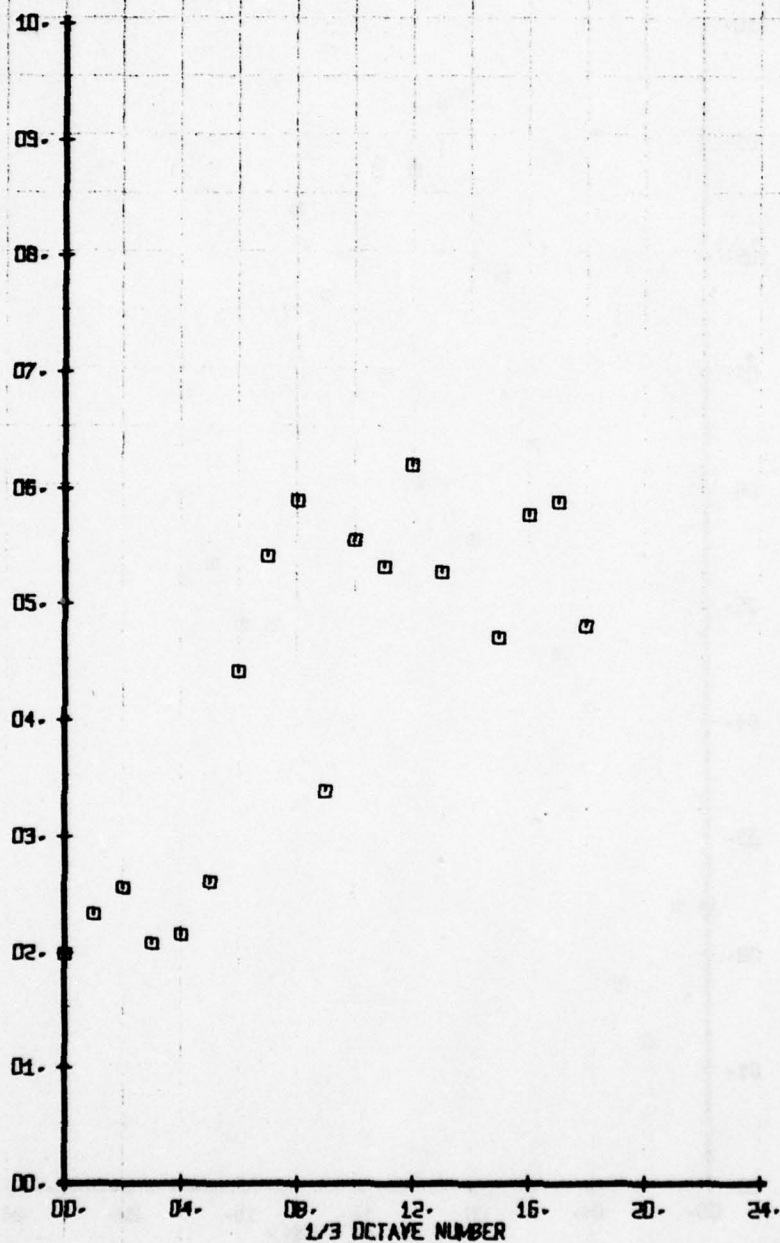
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W BODY 10-40-1-250 NO BLDS  
 RUN 154 TP 3

SYM  
 0

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



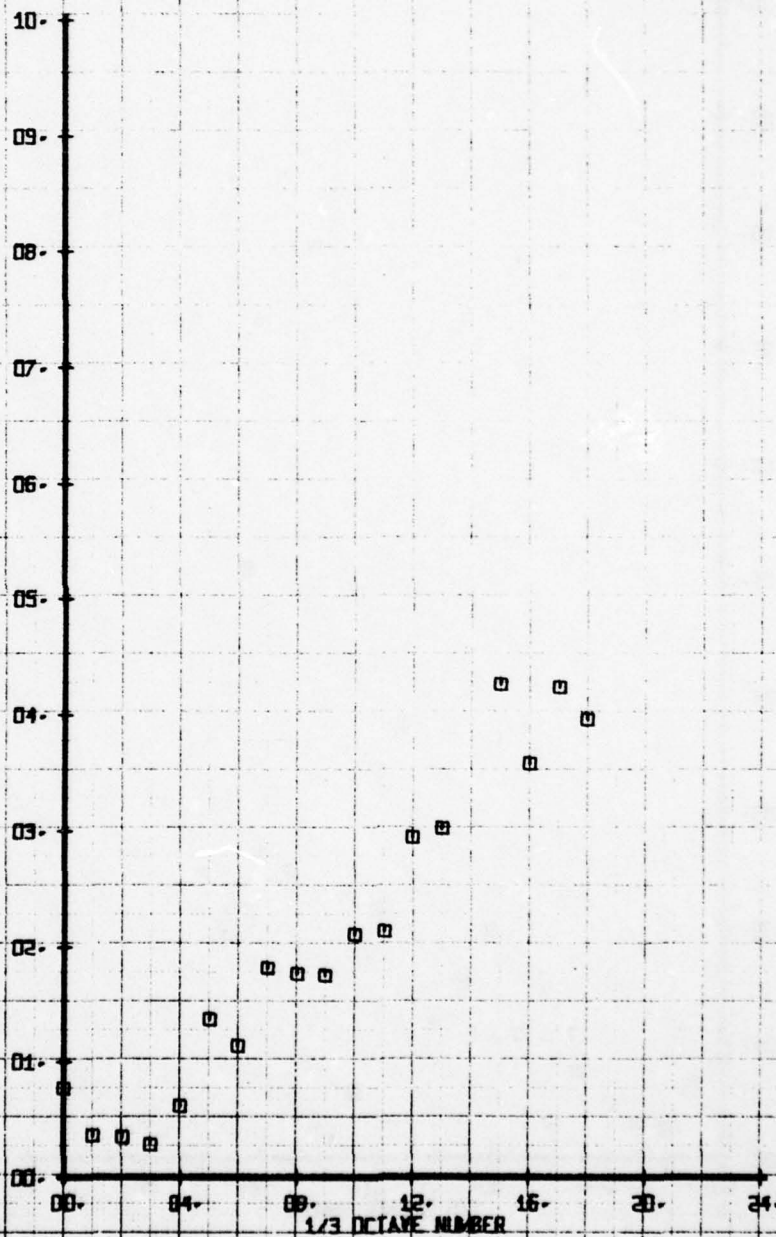
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W UBDY 10-40:1-256 NO BLOS  
RUN 154 TP 4

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

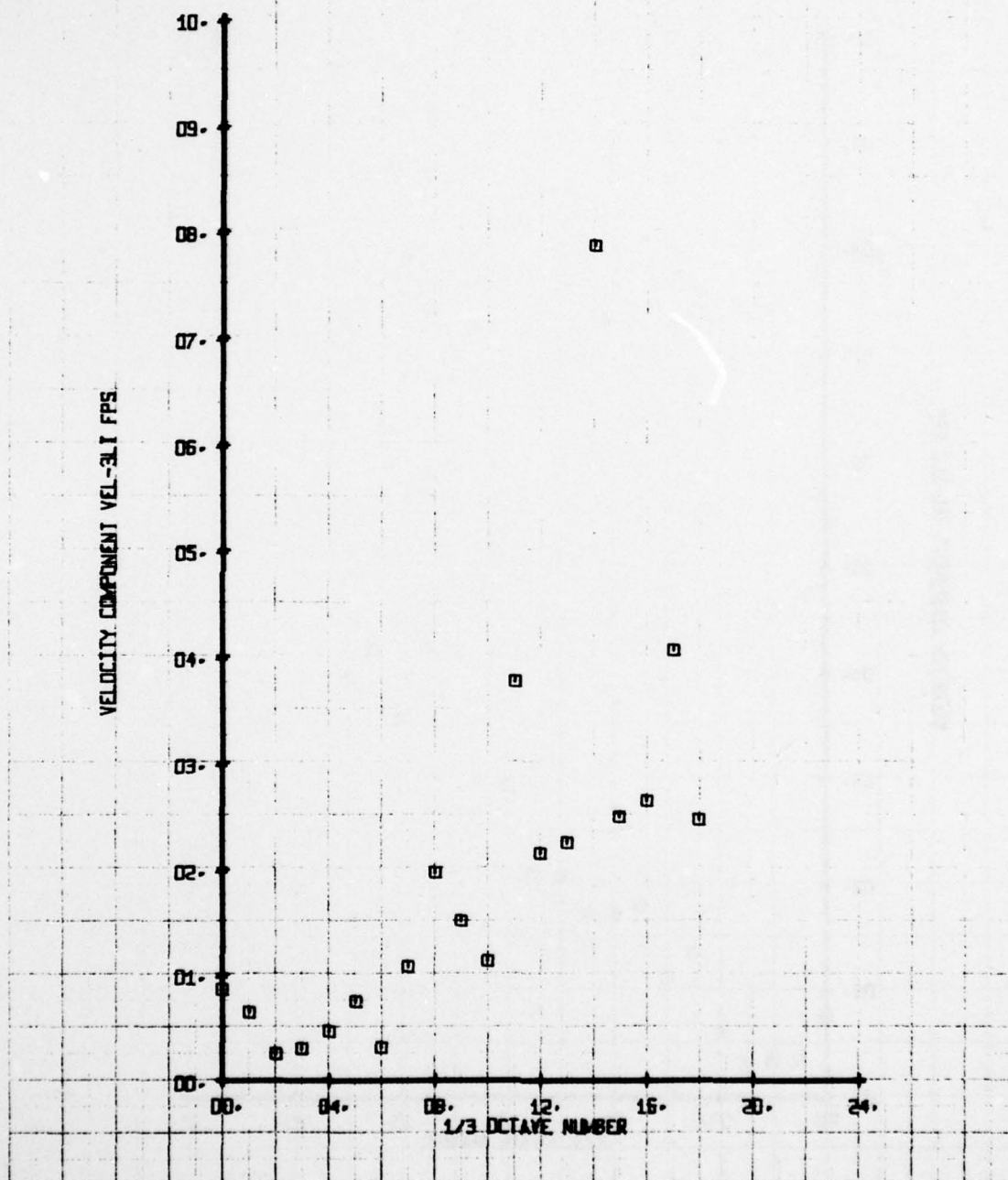
VELOCITY COMPONENT VEL-3LT FPS





HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W UBOY 10-40:1-256 NO BLOS  
 RUN 154 TP 5

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT



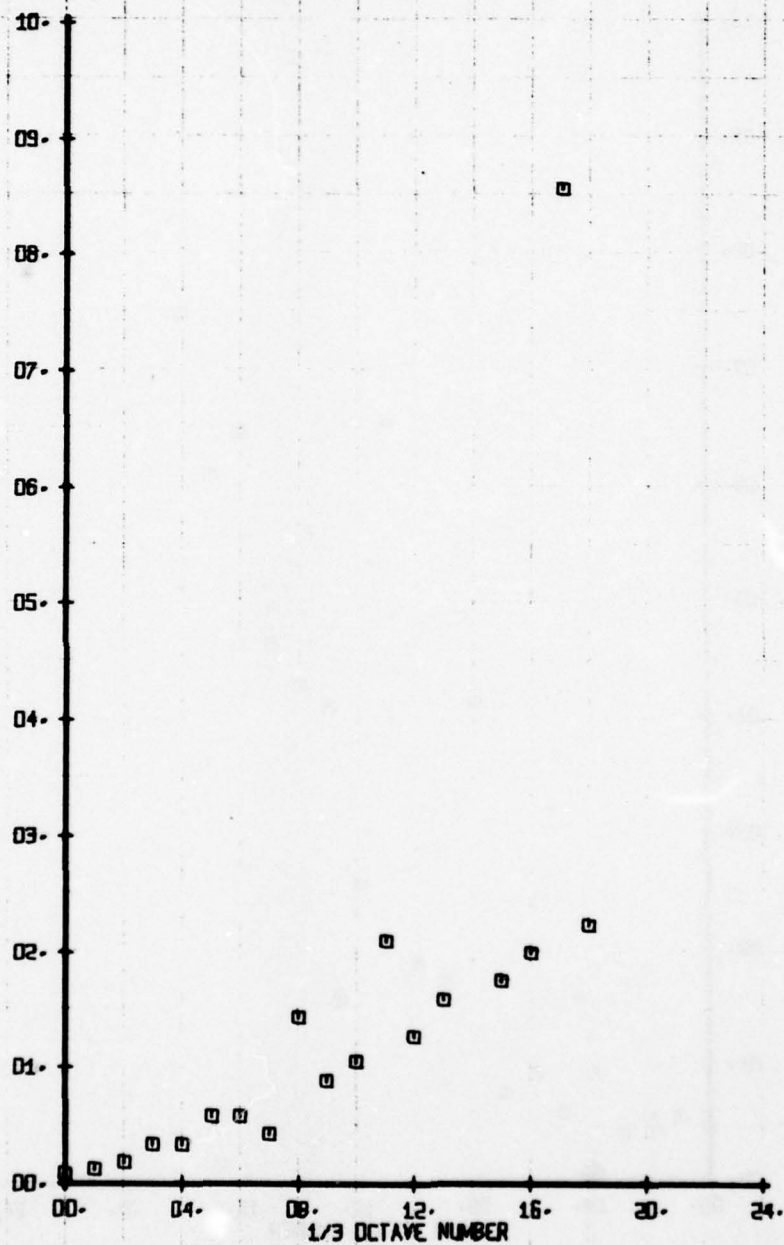
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LBOY 10-4041-250 NO BLOS  
 RUN 154 TP 6

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



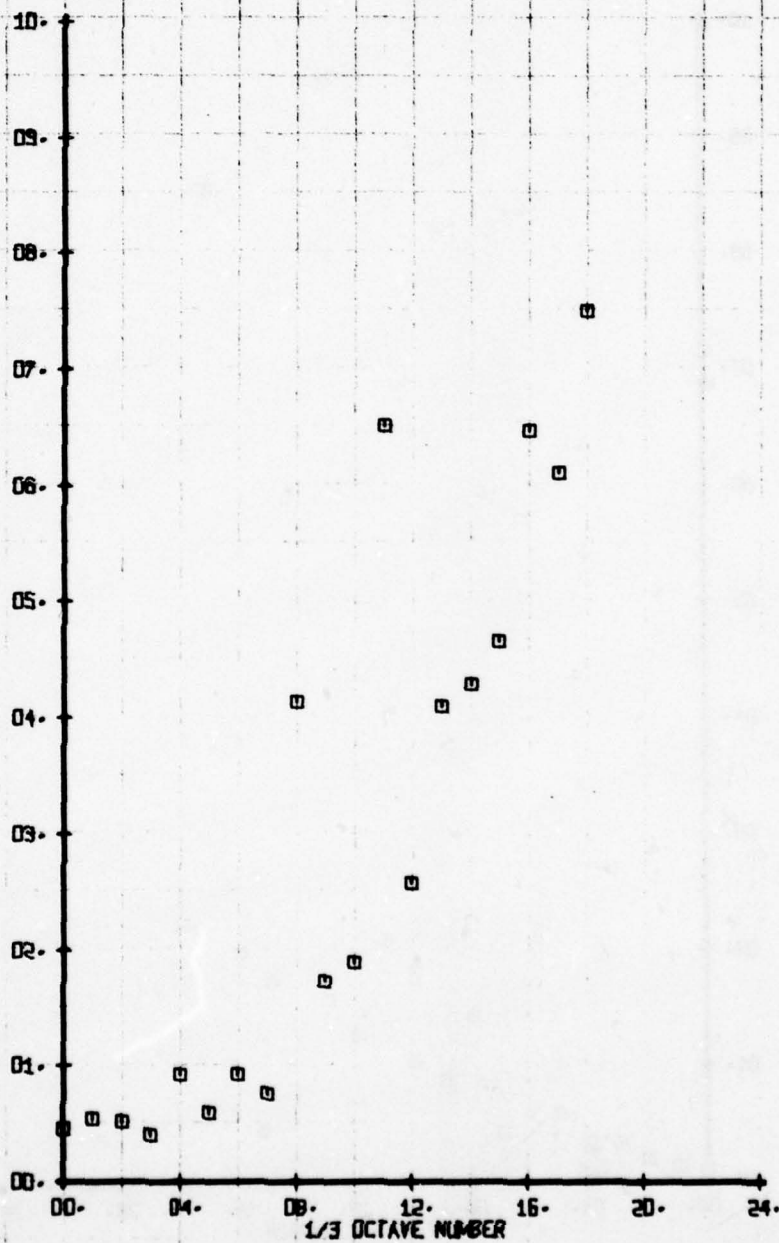
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 OPEN CAP W LRDY 10-40-1-250 NO. 8LDS  
 RUN 154 TP 7

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



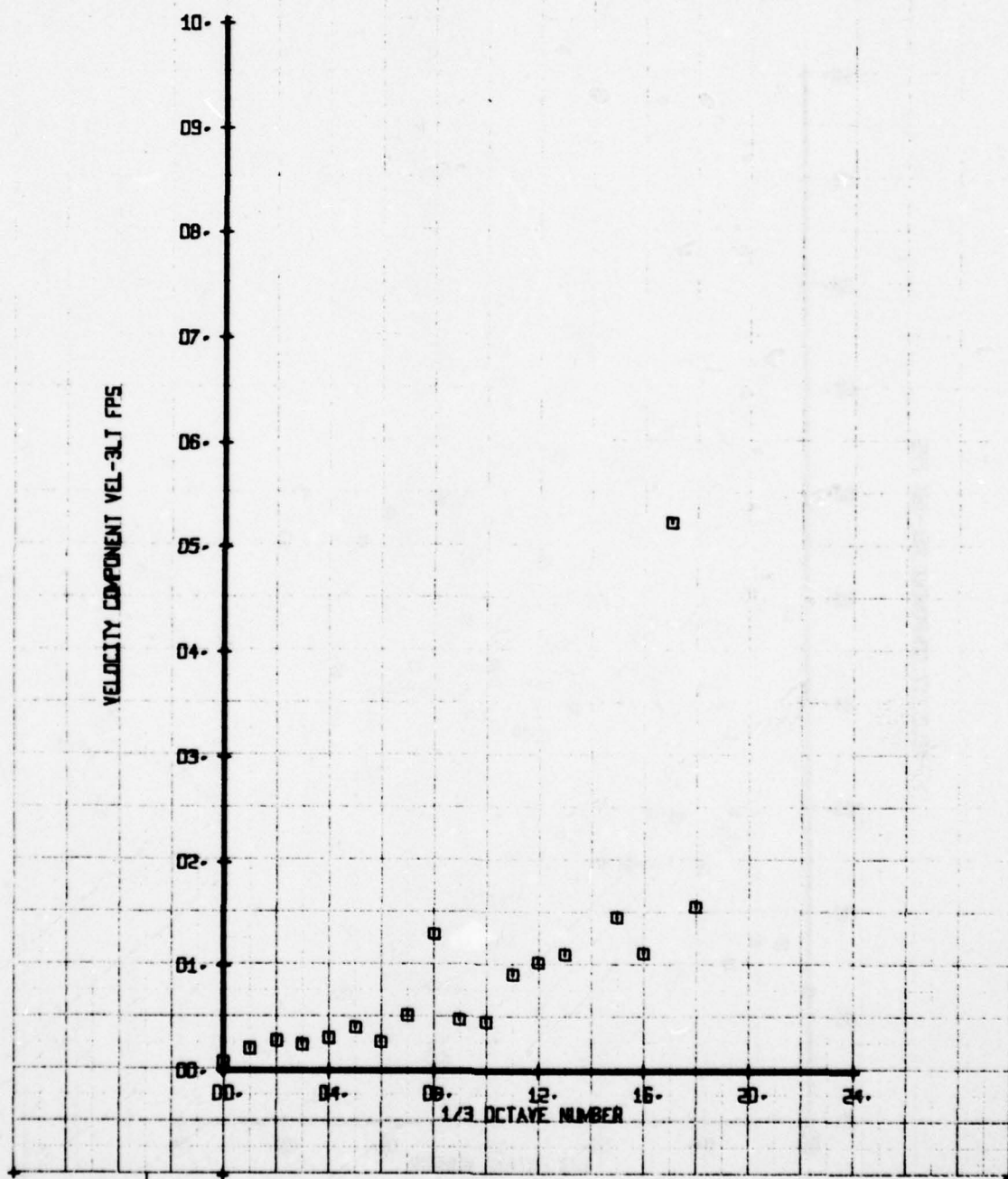


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
OPEN CAP W LB0Y 10-40:1-25G NO BLOS  
RUN 154 TP B

SYM  
□

CH  
70

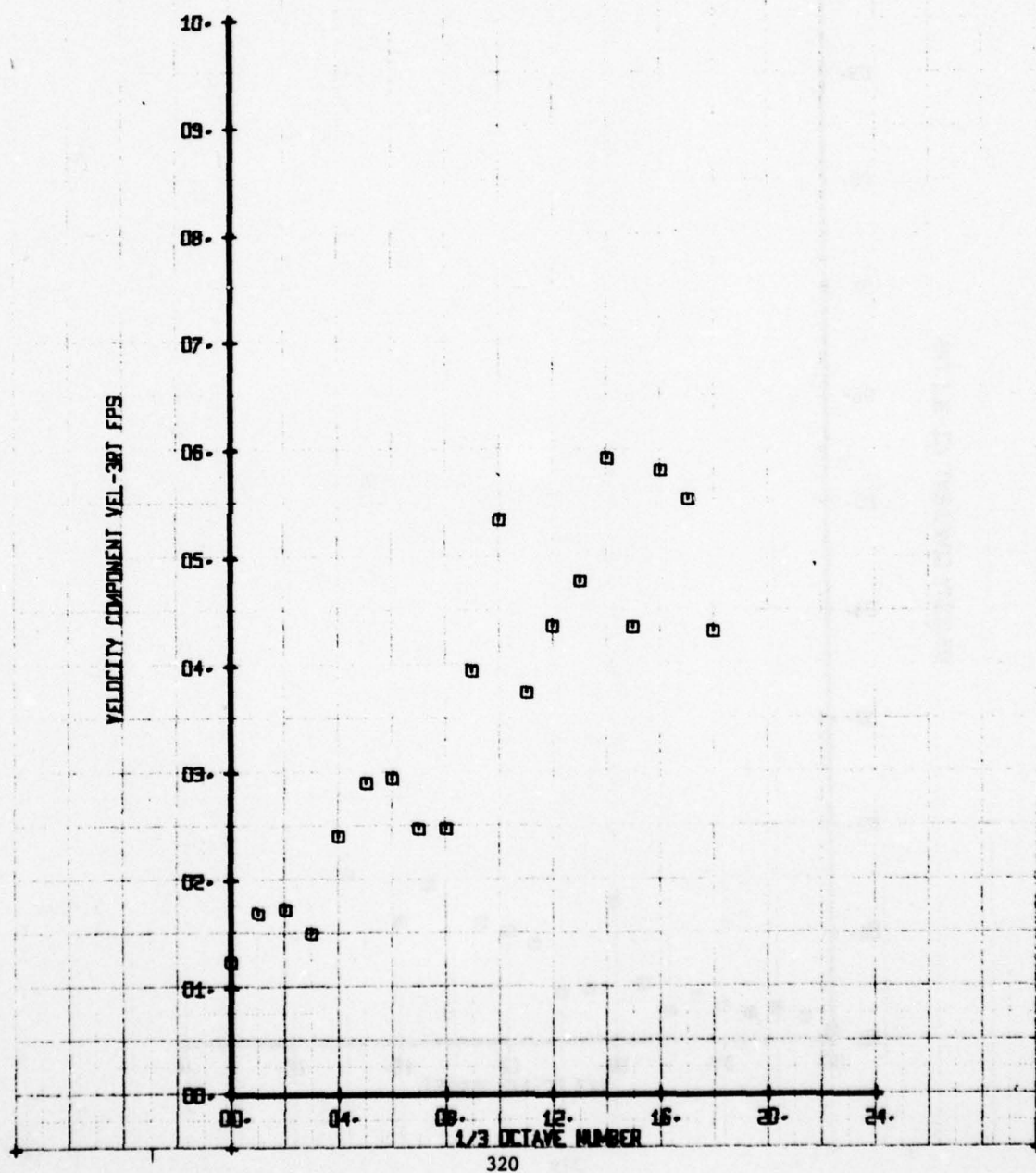
LEGEND  
PARAMETER  
VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 EFFECT OF AIR EJECT BASIC SYS NO BLD  
 RUN 172 TP 3

SYM  
 □

LEGEND  
 CH 71  
 PARAMETER  
 VEL-3RT

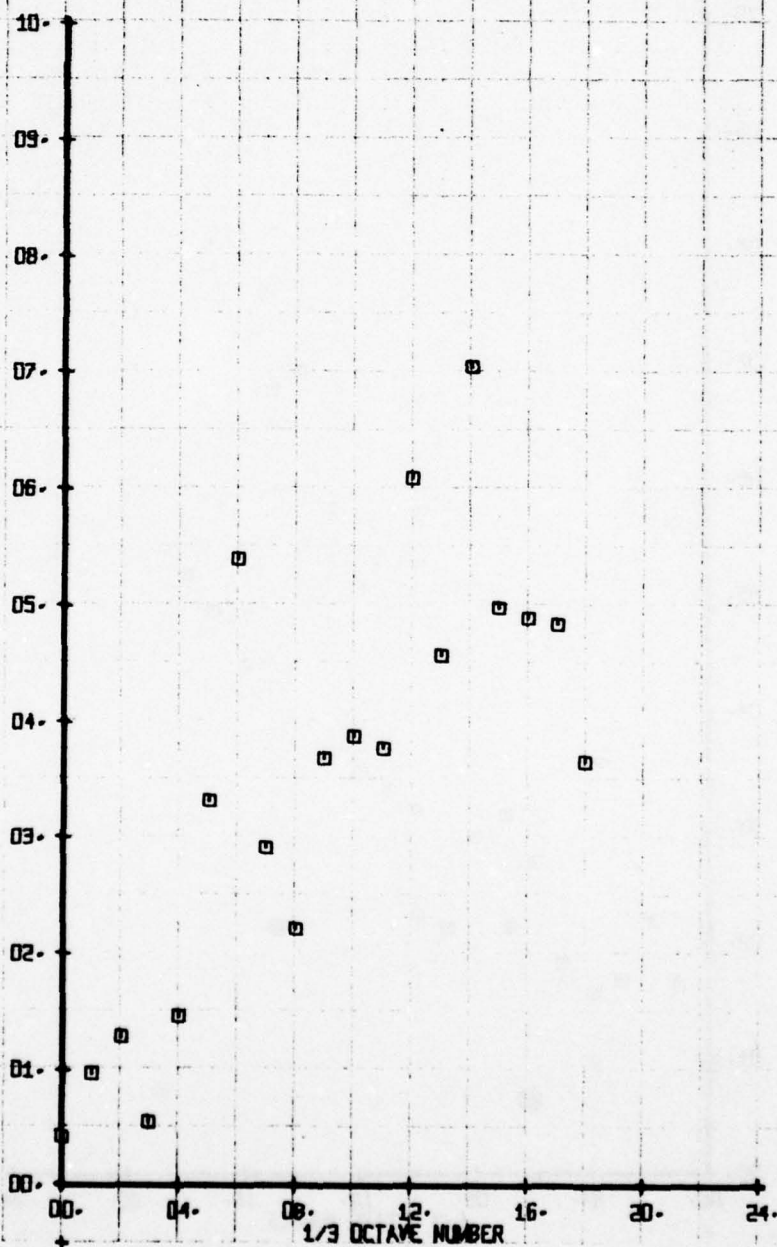


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 4

SYM  
□

LEGEND  
CH 71  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS





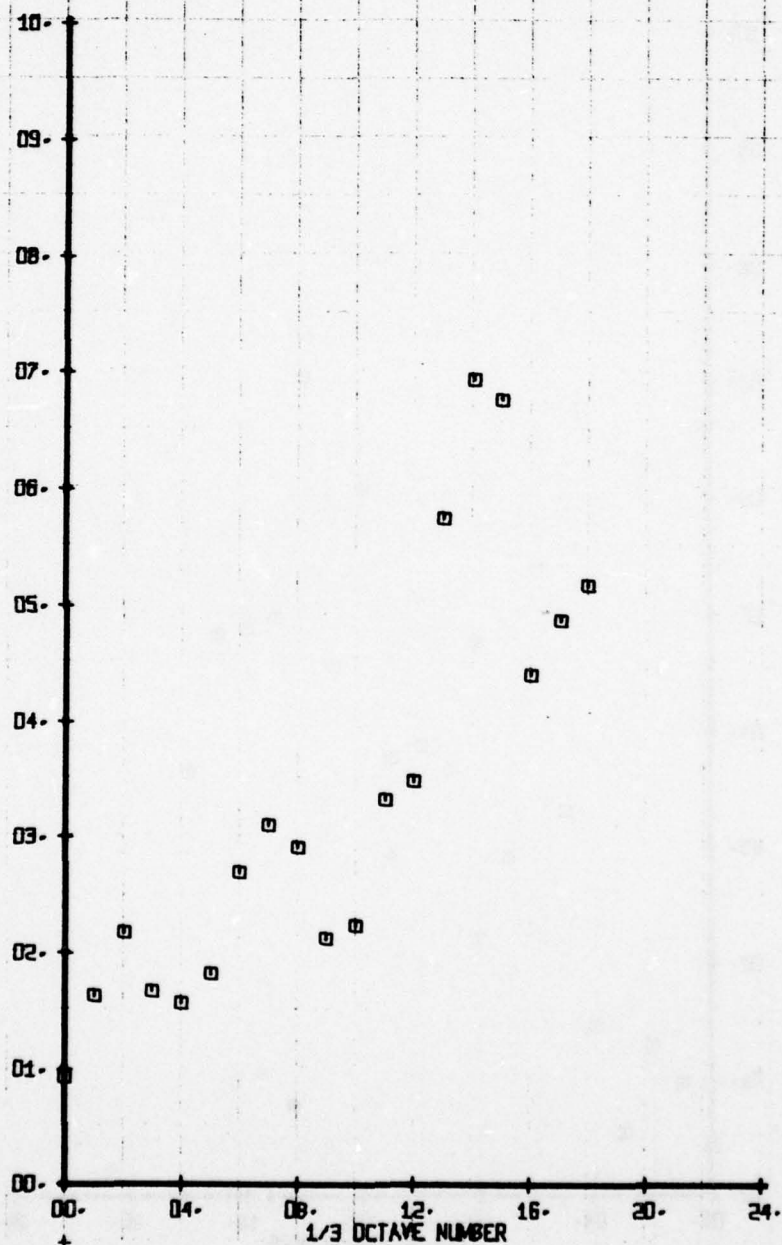
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 6

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

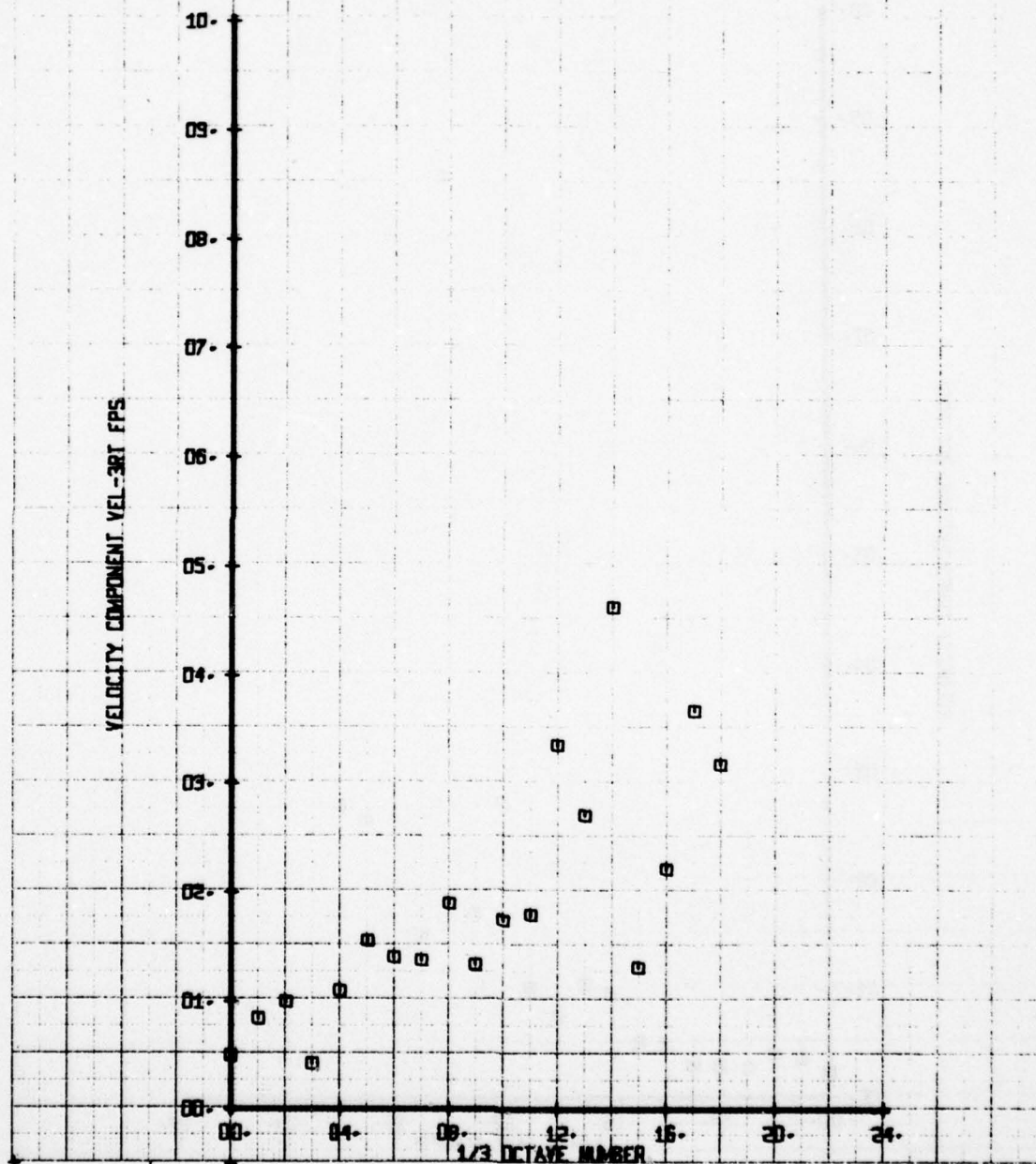


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO BLD  
RUN 172 TP 7

SYM  
□

CH  
71

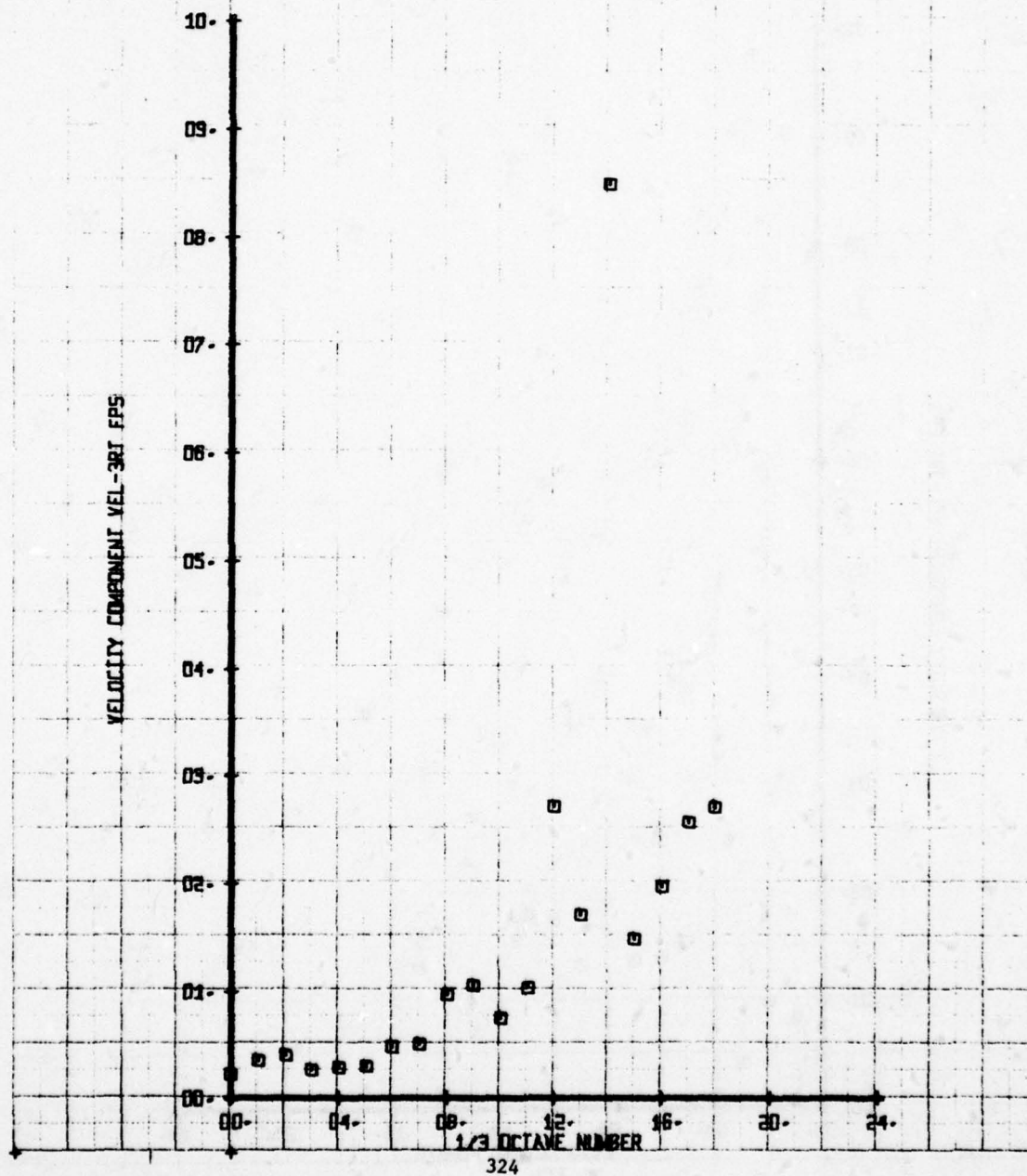
LEGEND  
PARAMETER  
VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO. 8LD  
RUN 172 TP 8

SYM  
Q

LEGEND  
CH 71 PARAMETER  
VEL-3RT





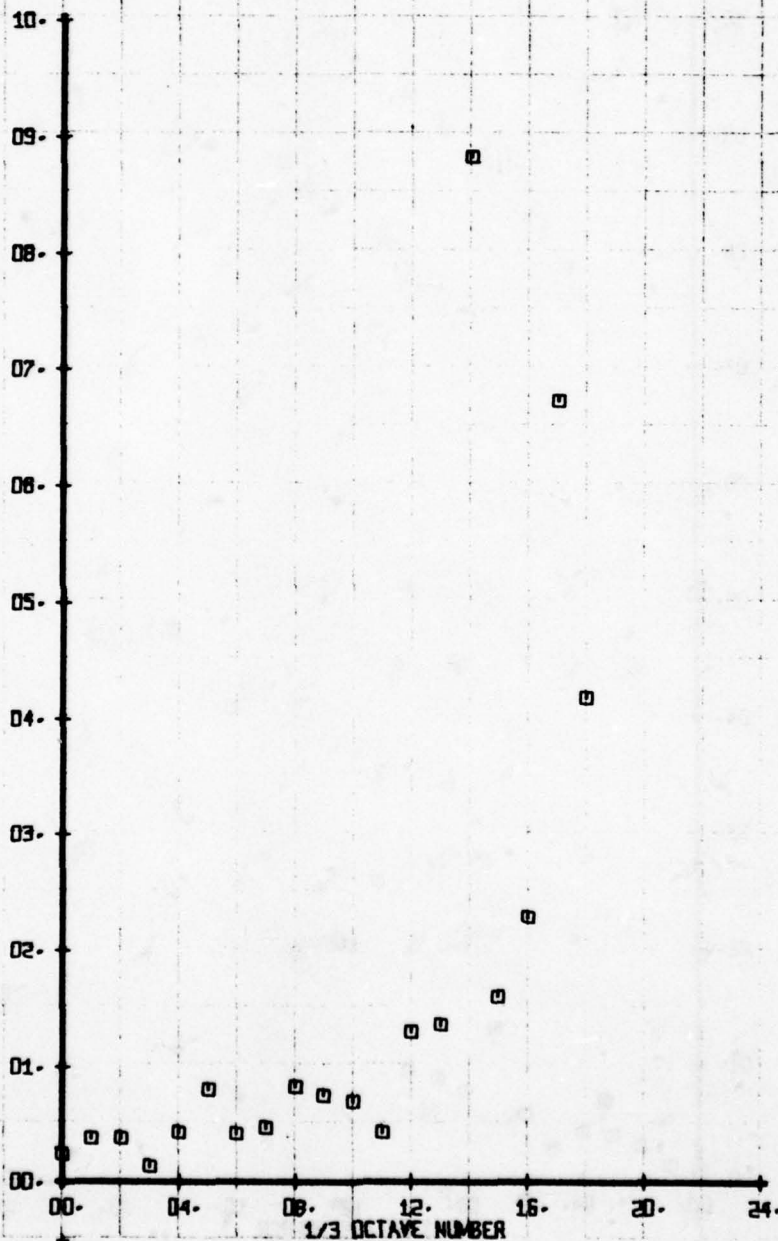
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 EFFECT OF AIR EJECT BASIC SYS NO-8LO  
 RUN 172 TP 9

SYM  
 0

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



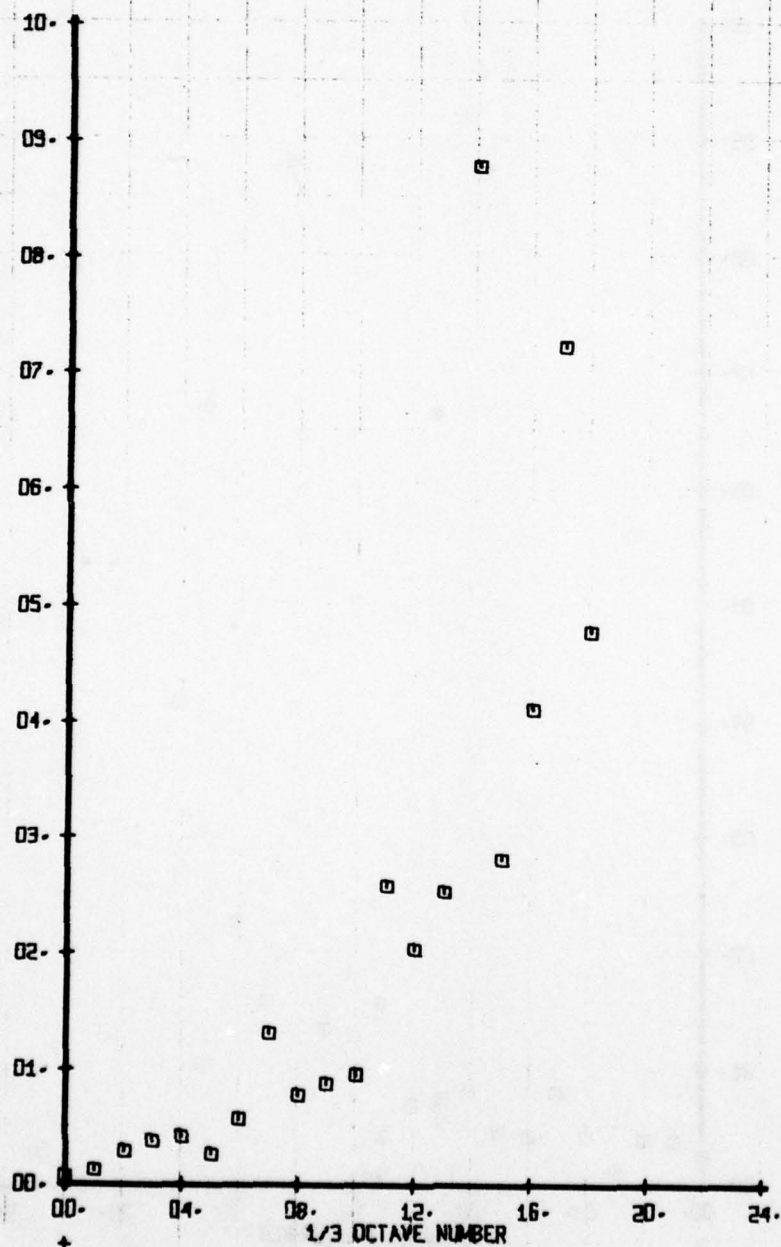
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 1D

SYM  
□

CH  
71

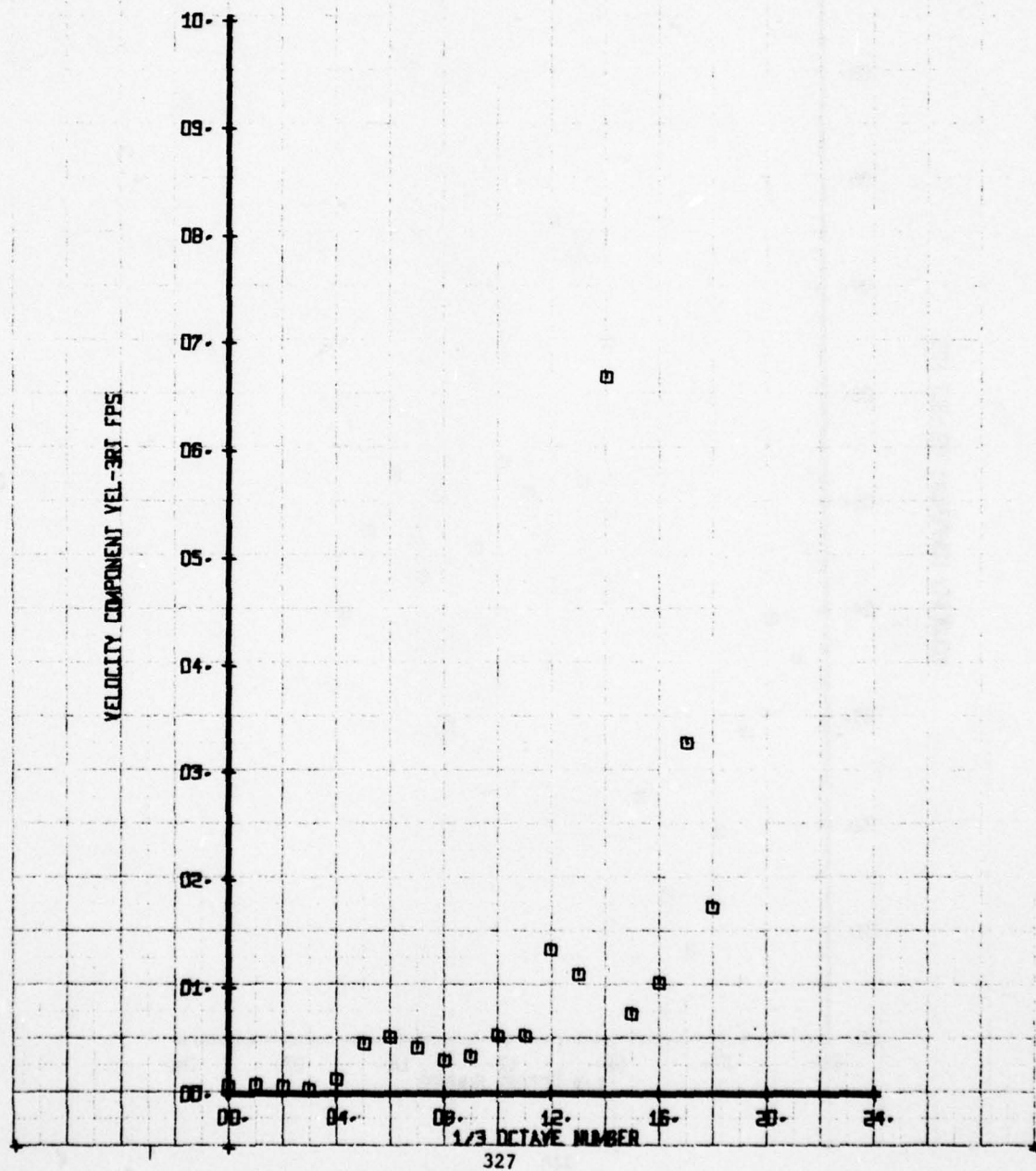
LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO BLD  
RUN 172 TP 11

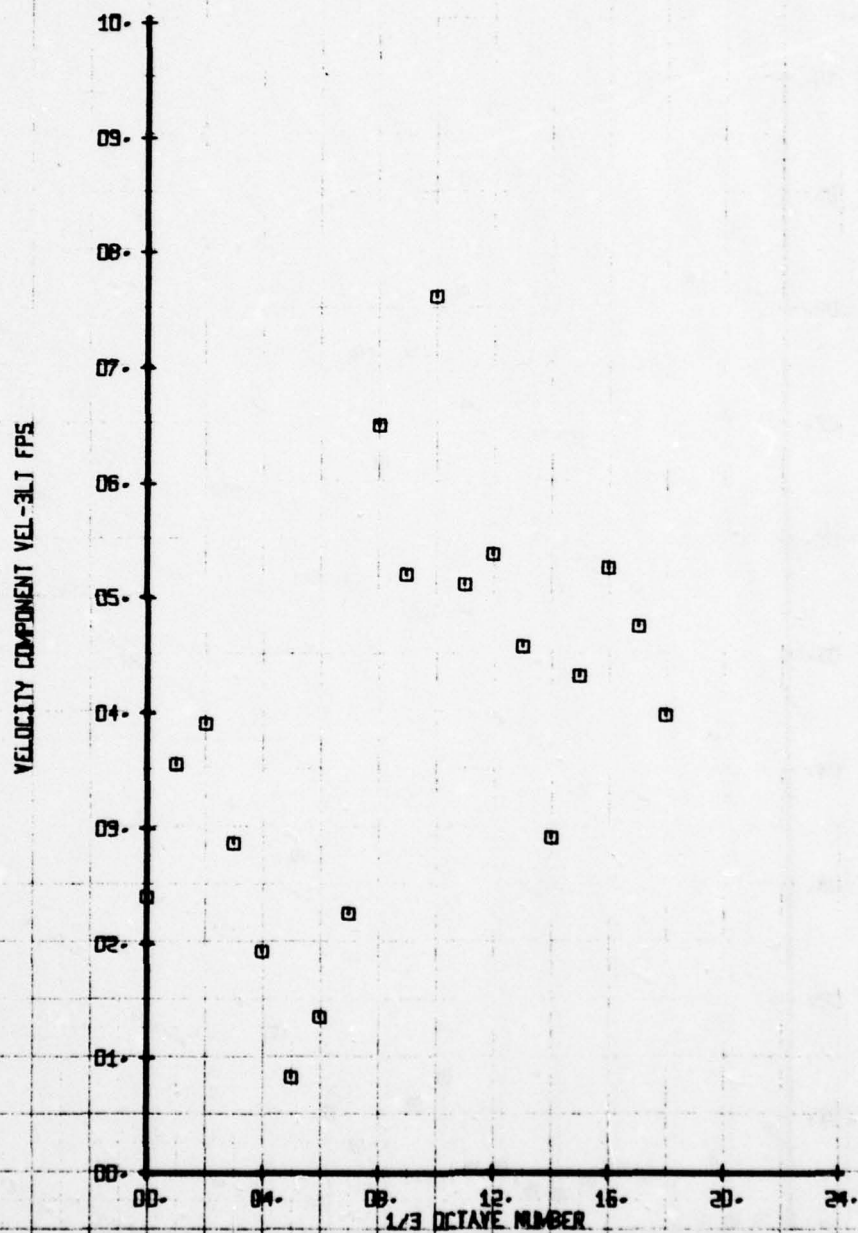
LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT





HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 3

LEGEND  
SYM CH PARAMETER  
□ 70 VEL-3LT

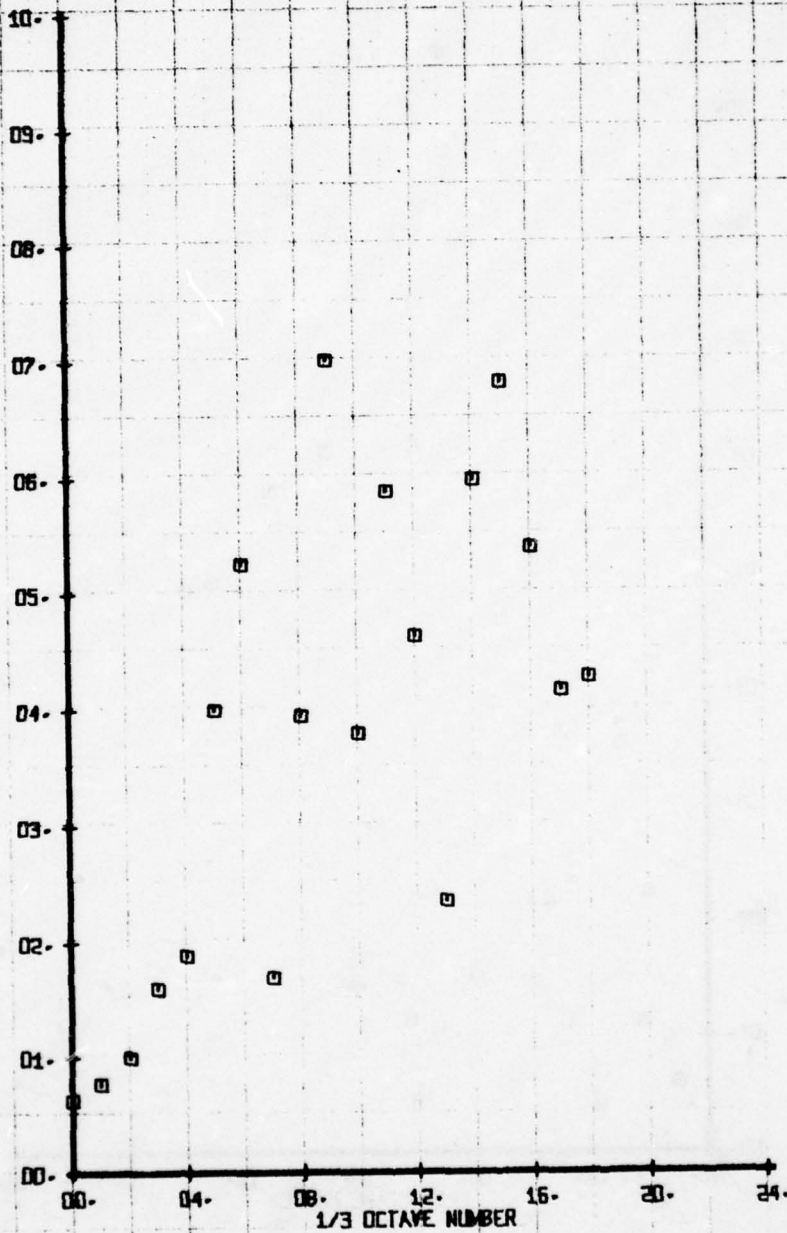


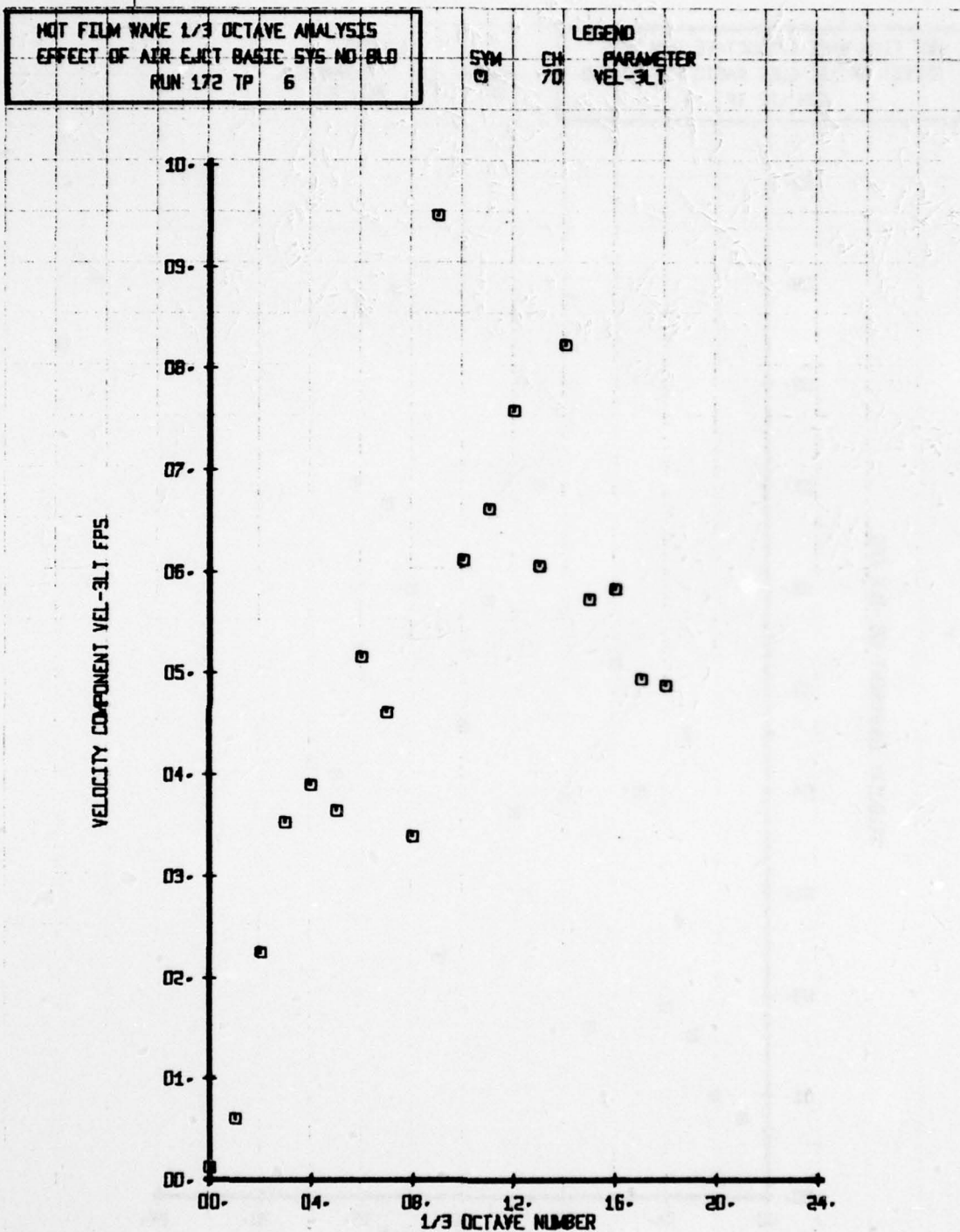
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 4

SYM  
O

LEGEND  
CH 70  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



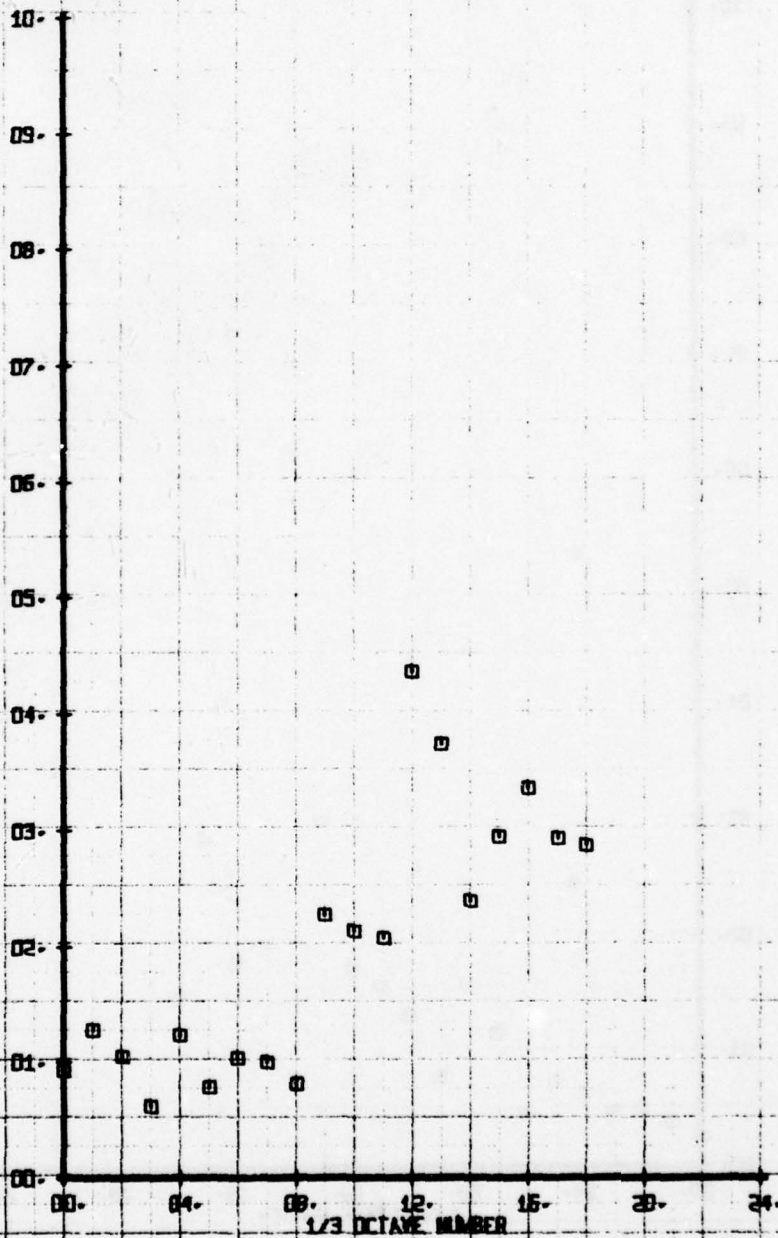




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 7

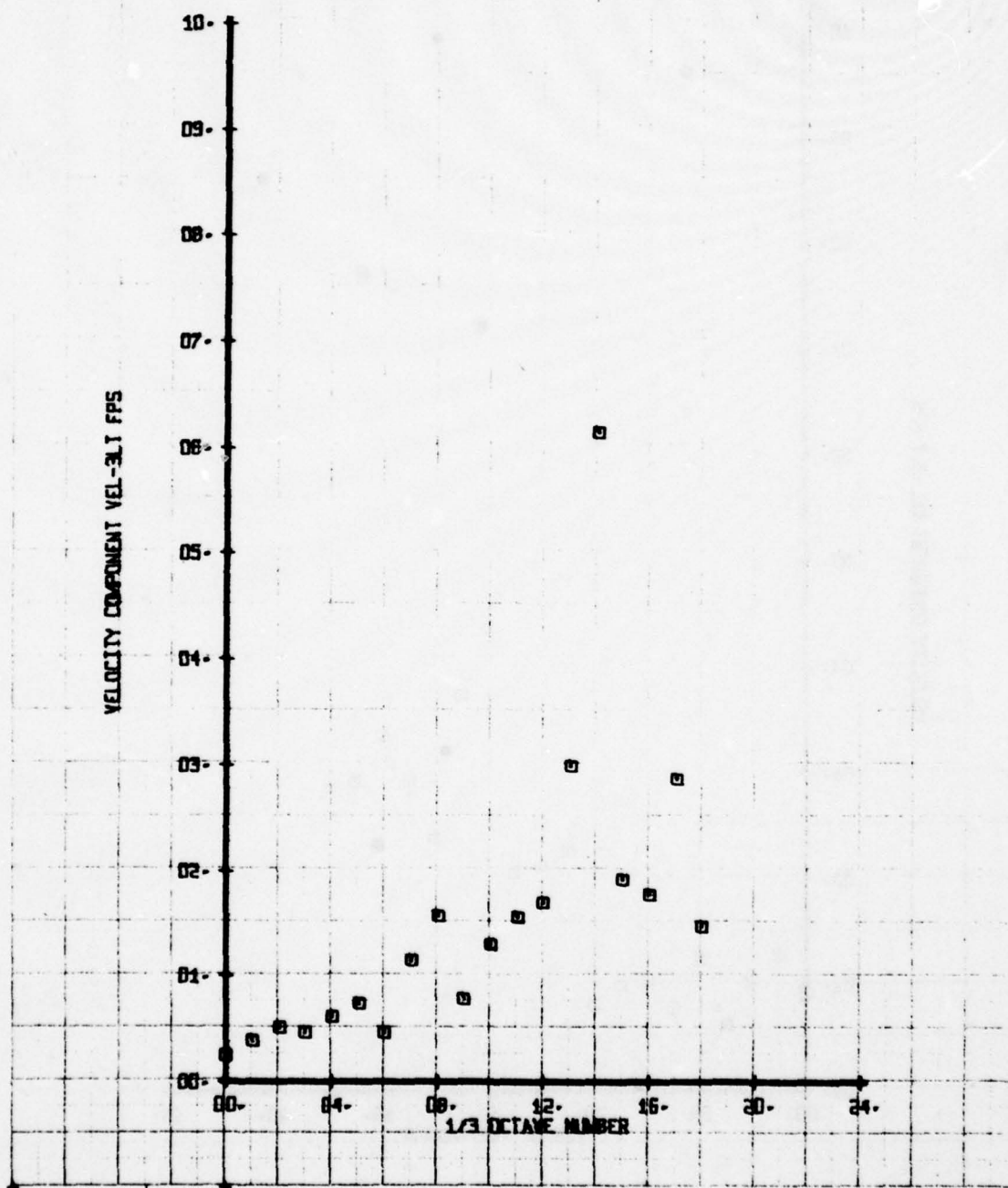
LEGEND  
SYM CH PARAMETER  
O 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO BLD  
RUN 172 TP 8

LEGEND  
SYM CH PARAMETER  
Q 70 VEL-3LT



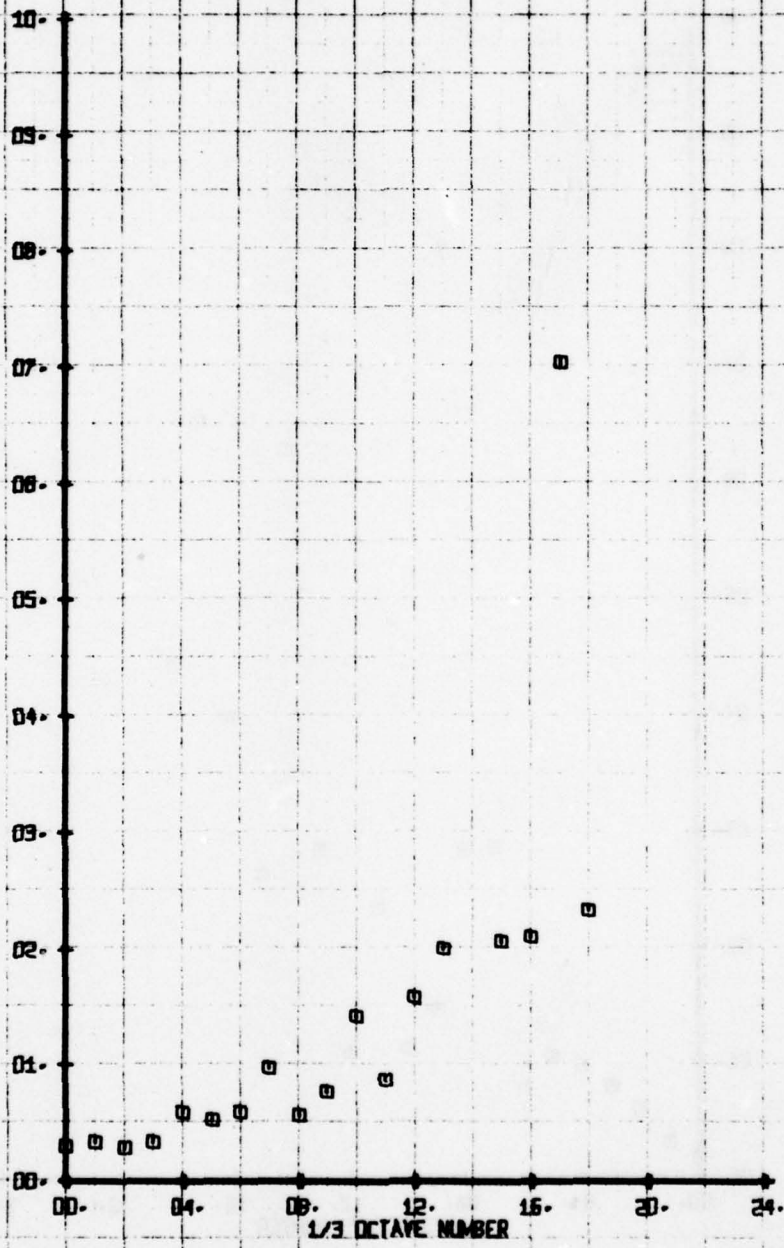
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO 8LD  
RUN 172 TP 8

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





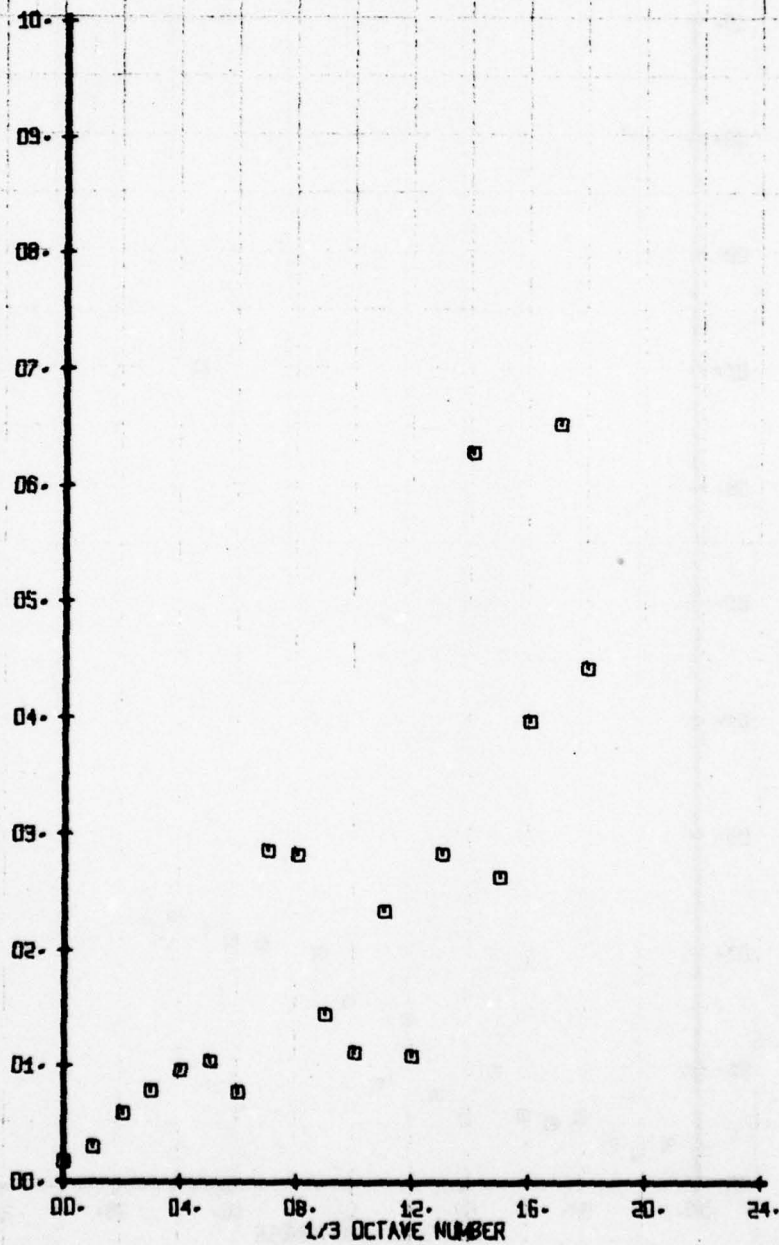
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS NO. BLD  
RUN 172 TP 10

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



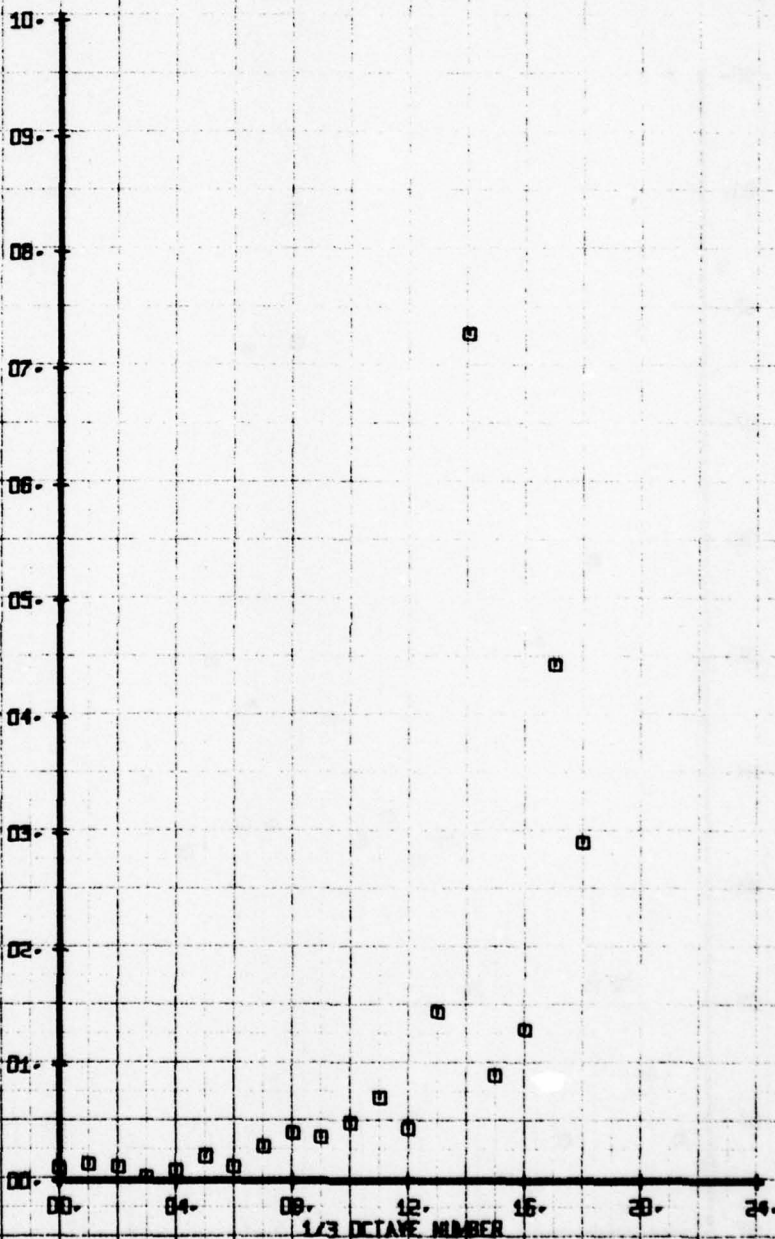
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AER EJET BASIC SYS NO BLD  
RUN 172 TP 11

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

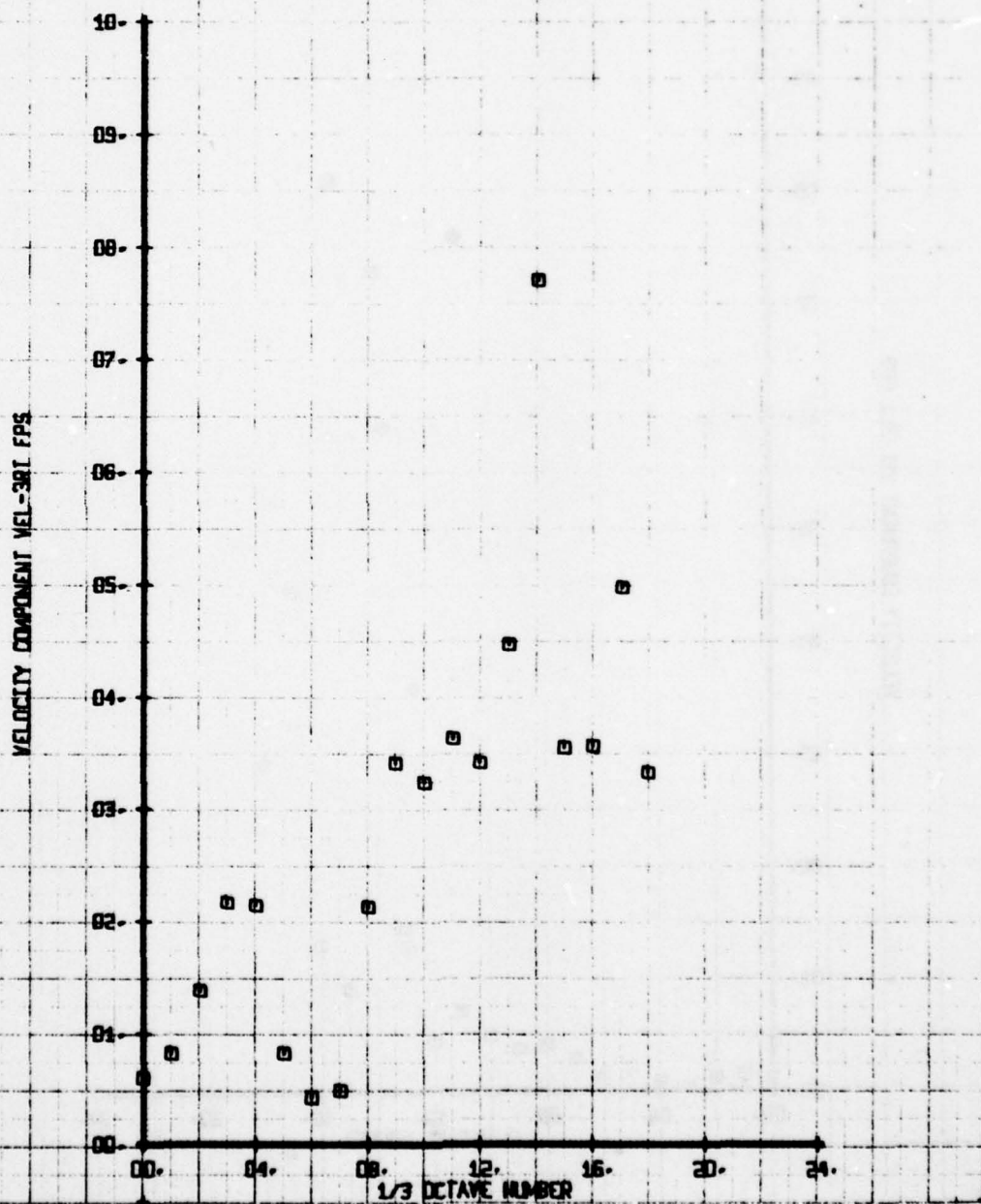
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS 150PSI  
RUN 174 TP 1

SYM  
□

LEGEND  
CH 71  
PARAMETER  
VEL-3RT

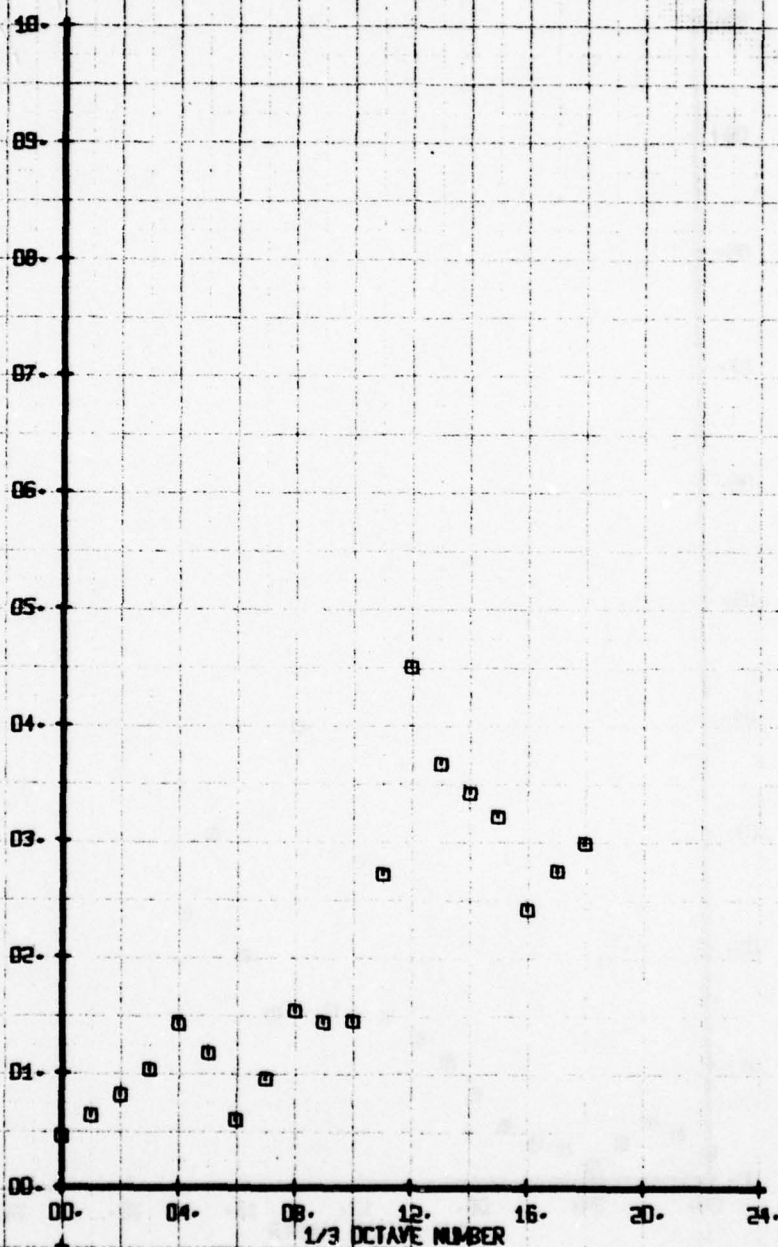




HOT FILM WIRE 1/3 OCTAVE ANALYSIS  
 EFFECT OF AIR EJECT BASIC SYS 150PST  
 RUN 174 TP 2

SYM	CH	PARAMETER
0	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



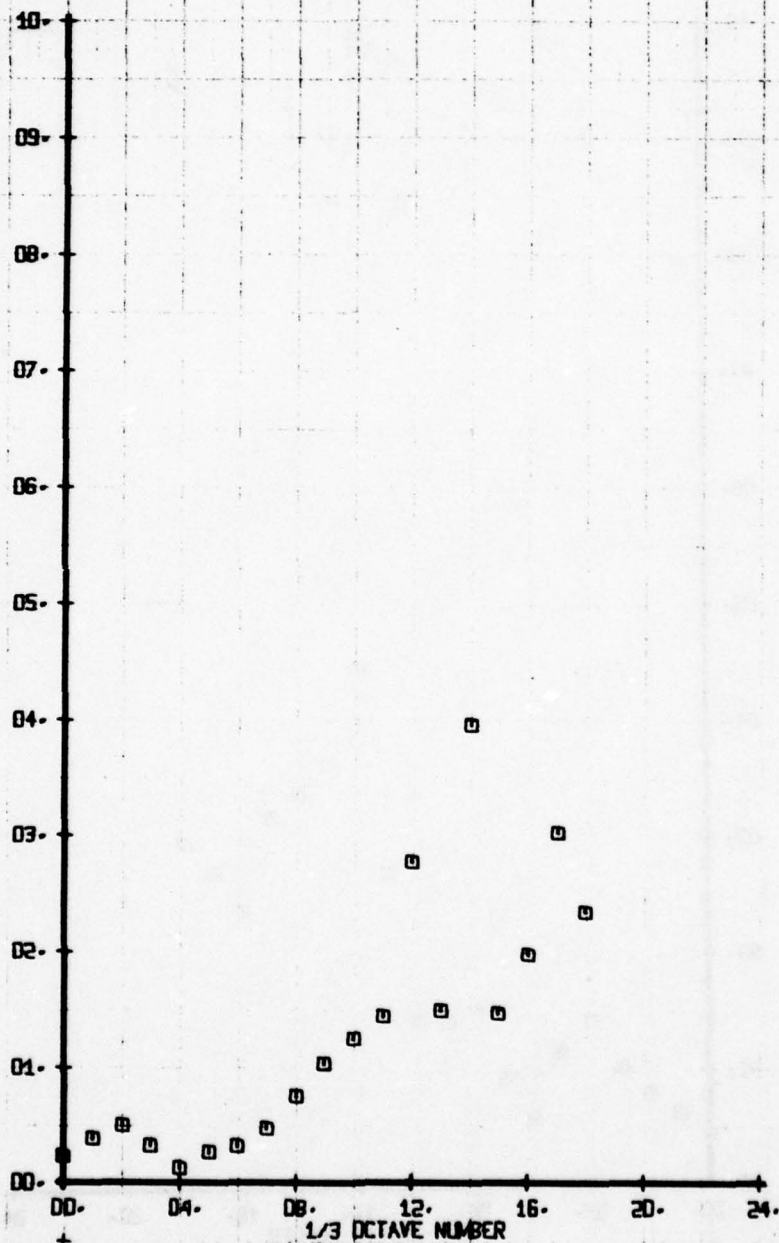
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS 150PSI  
RUN 174 TP 3

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



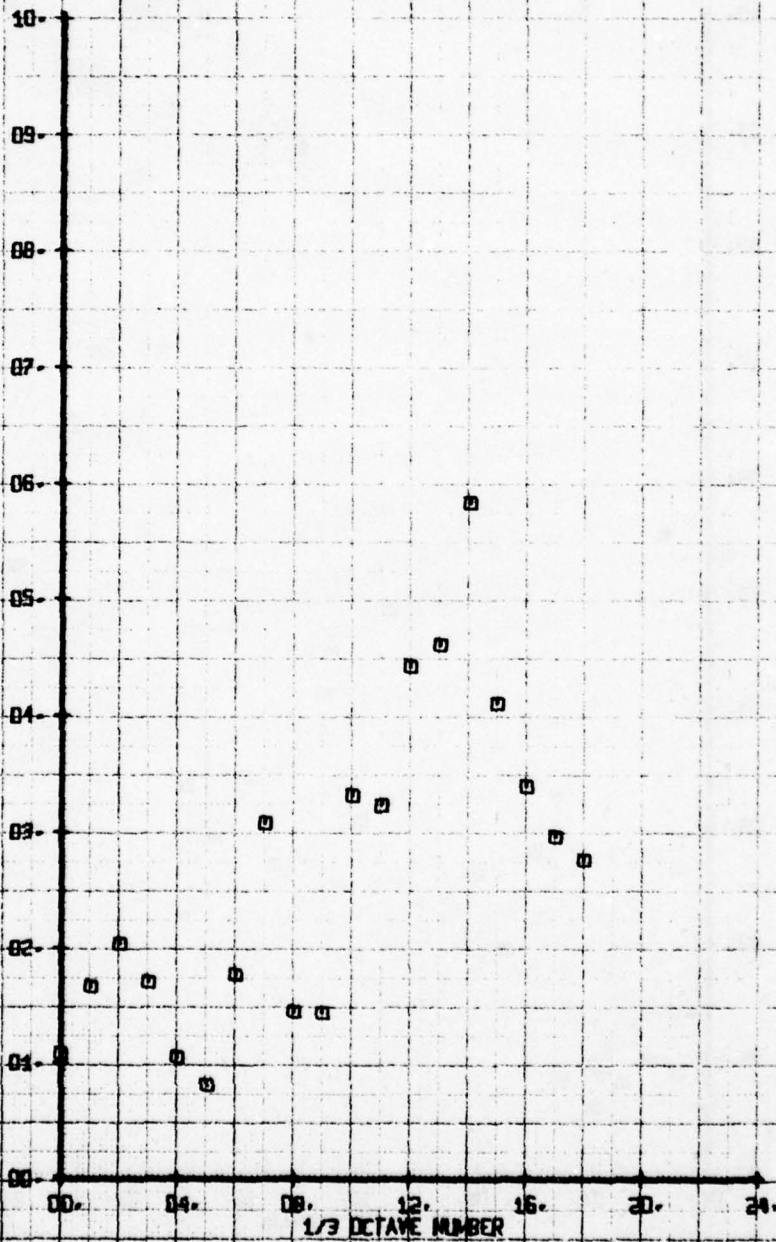
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS 150PST  
RUN 174 TP 1

SYM  
O

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

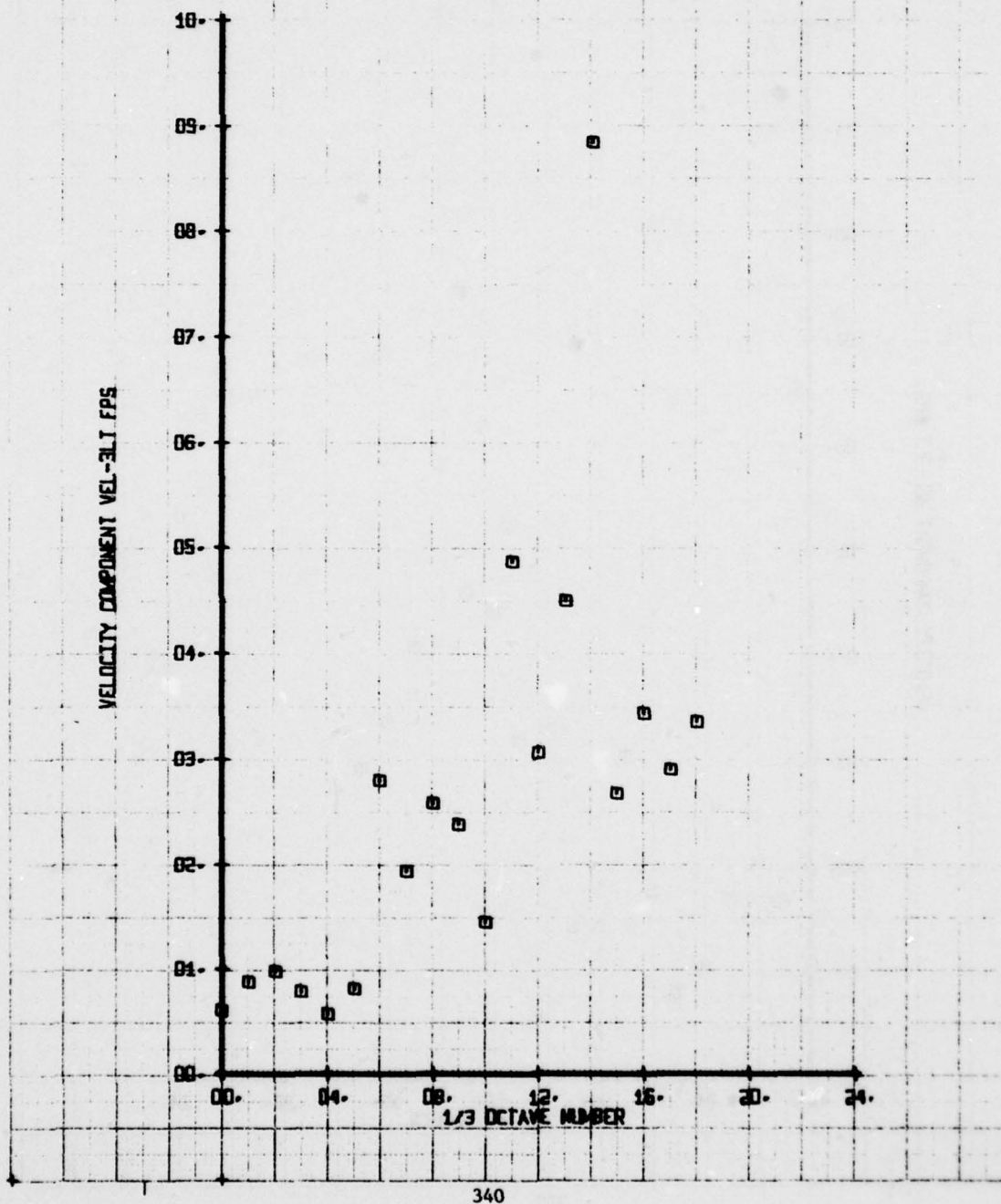
VELOCITY COMPONENT VEL-3LT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS 150PSI  
RUN 174 TP 2

LEGEND  
SYM CH PARAMETER  
□ 70 VEL-3LT



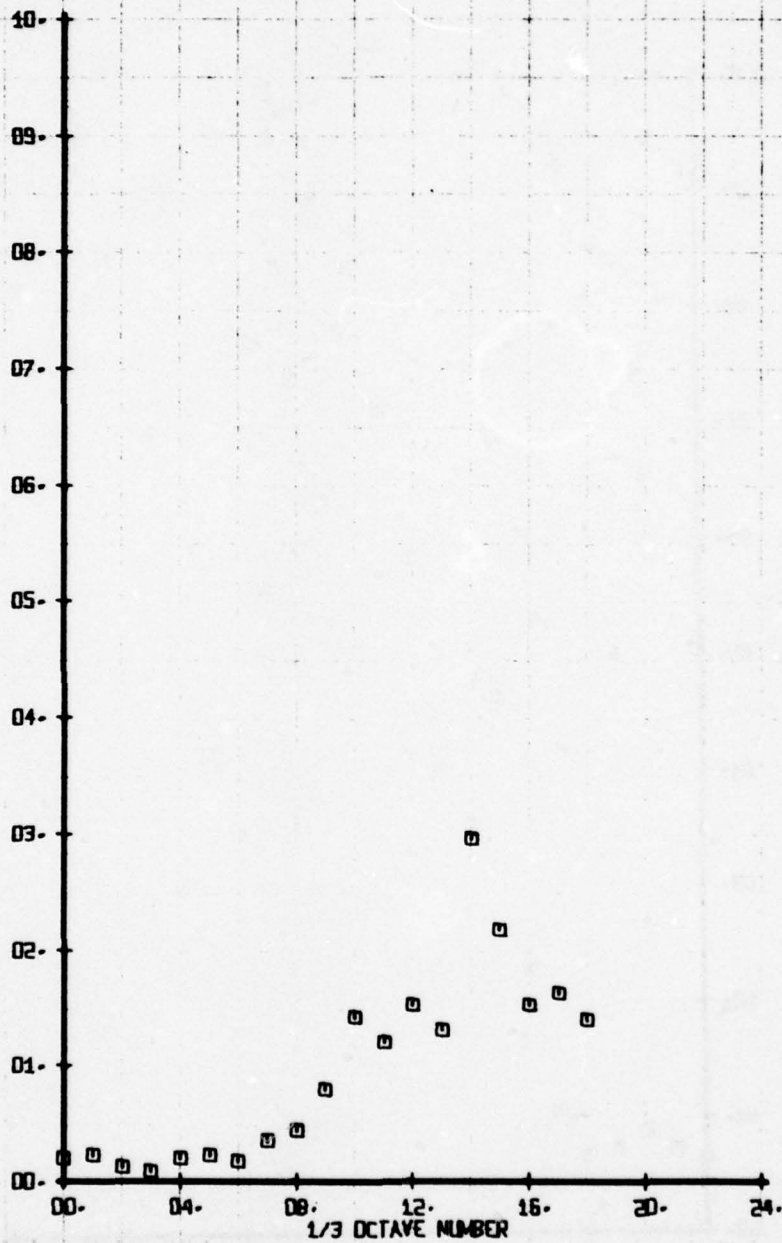
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
EFFECT OF AIR EJECT BASIC SYS 150PSI  
RUN 174 TP 3

SYM  
0

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



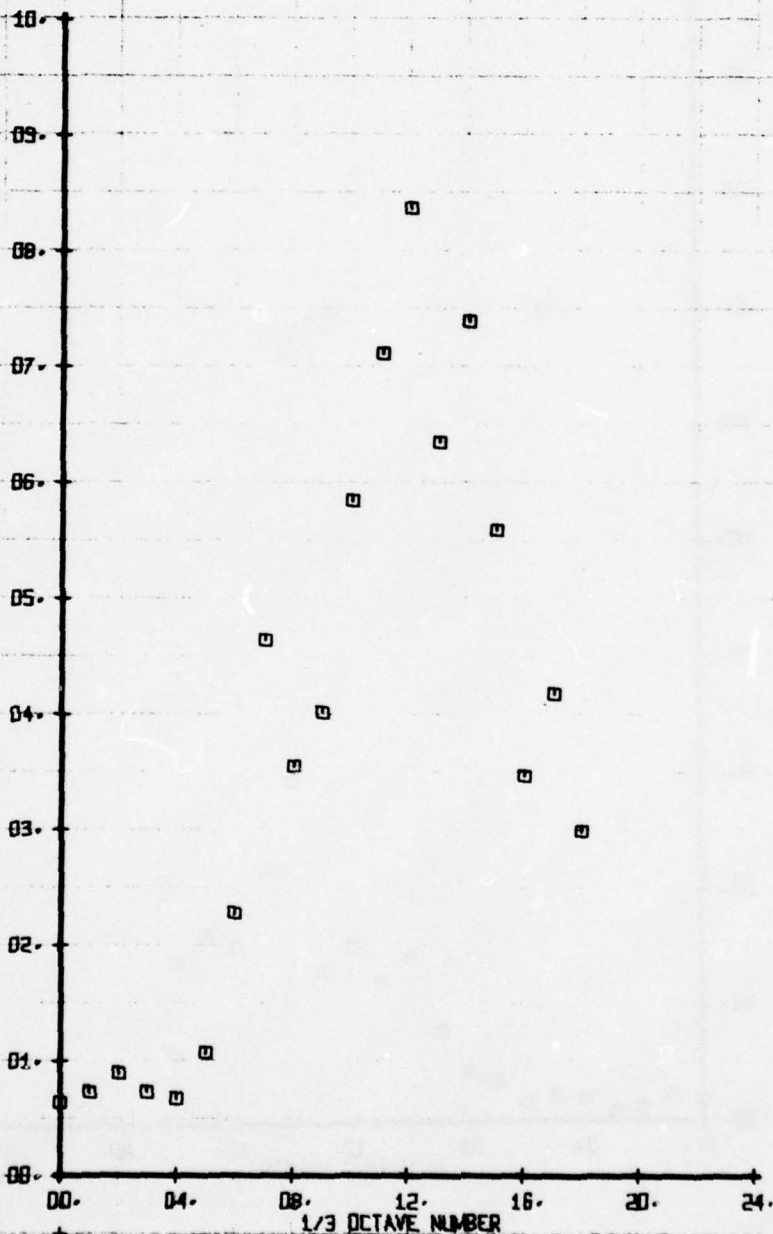
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECTOR W/O SHROUD-150 PSI  
RUN 176 TP 1

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



1/3 OCTAVE NUMBER

342

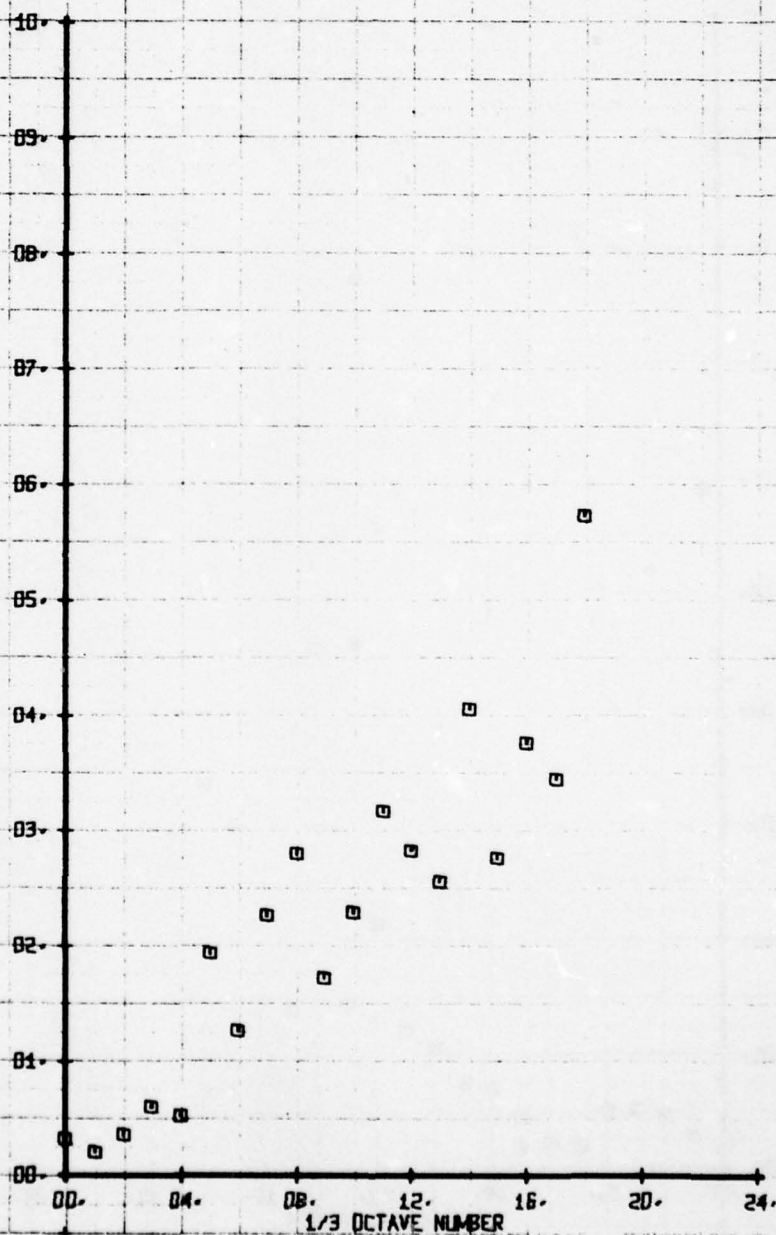


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECTOR W/ SHROUD-150 PSI  
RUN 176 TP 2

SYM  
□

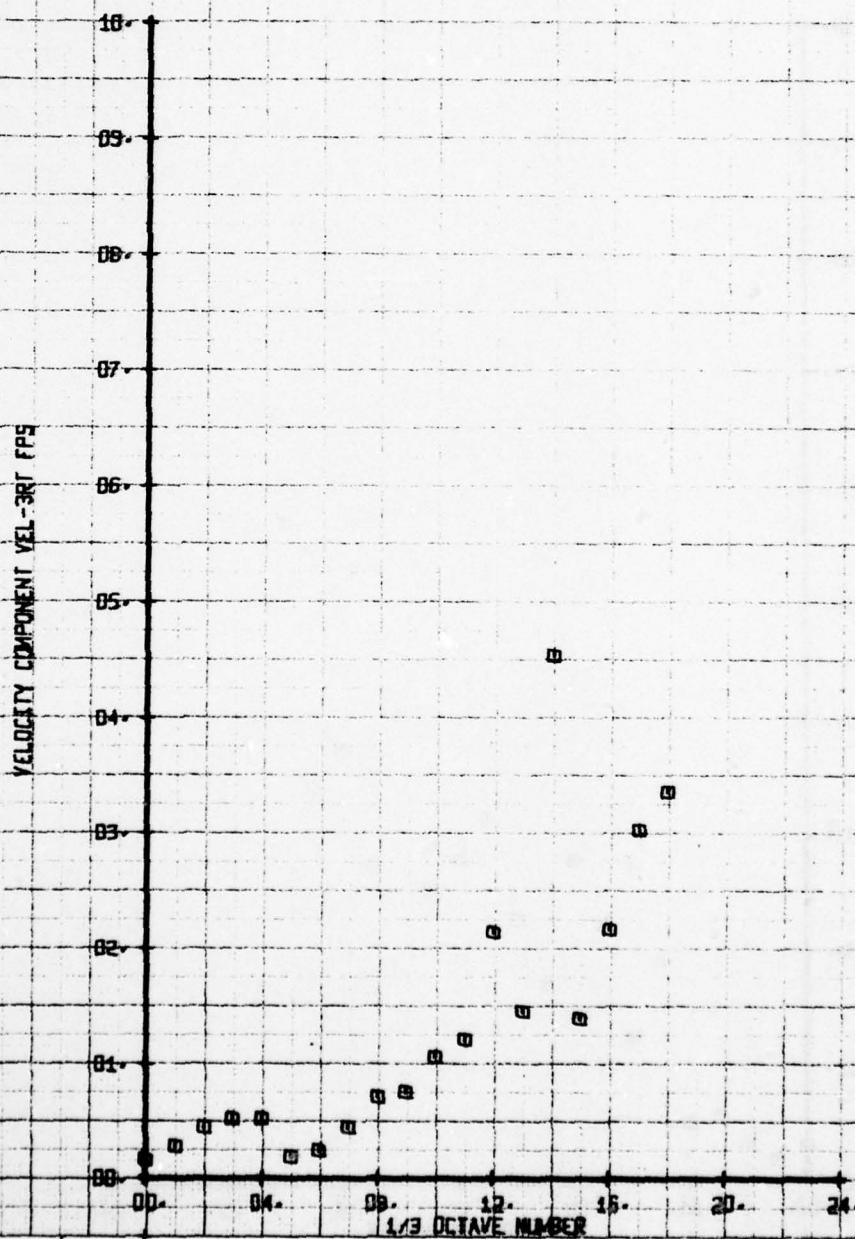
LEGEND  
CH 71  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECTOR W/C SHROUD-150 PSI  
 RUN 176 TP 3

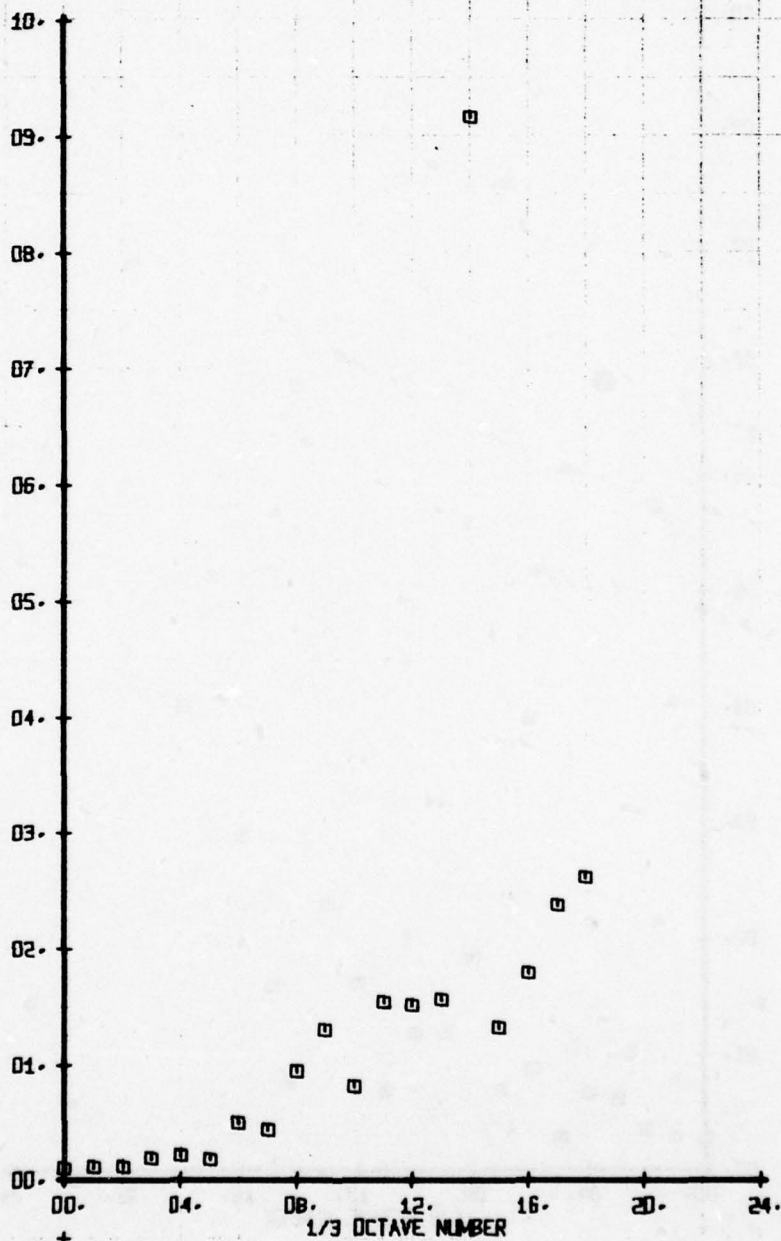
LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECTOR W/C SHROUD-150 PSI  
RUN 176 TP 4

SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



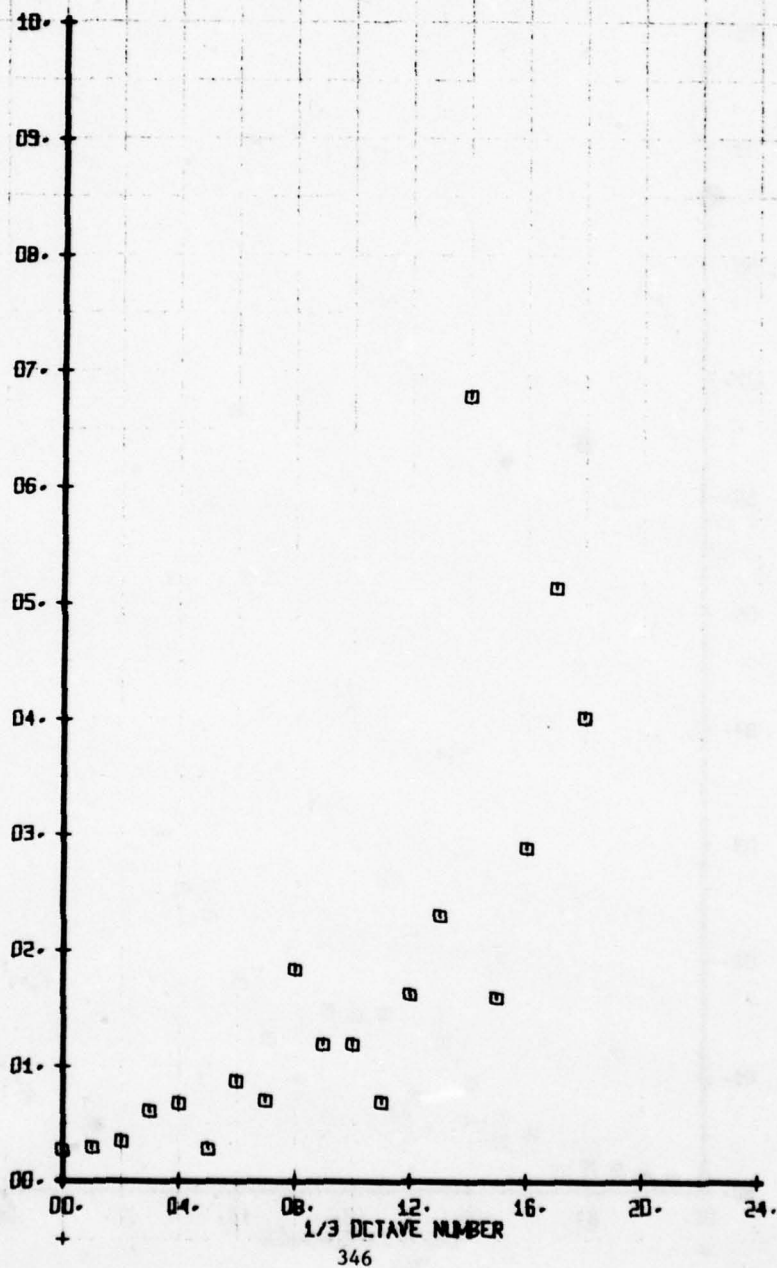
345



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECTOR W/C SHROUD-150 PSI  
RUN 176 TP 5

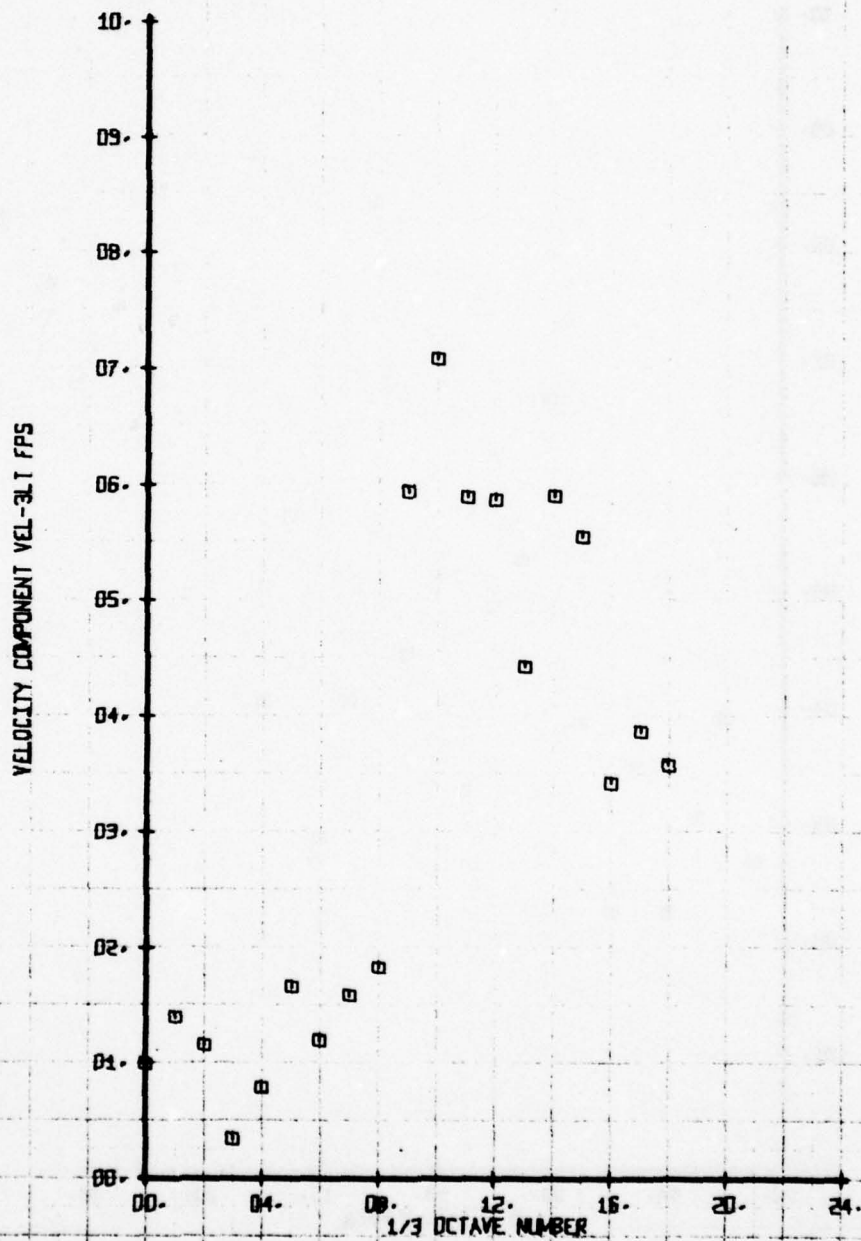
SYM CH LEGEND  
□ 71 PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



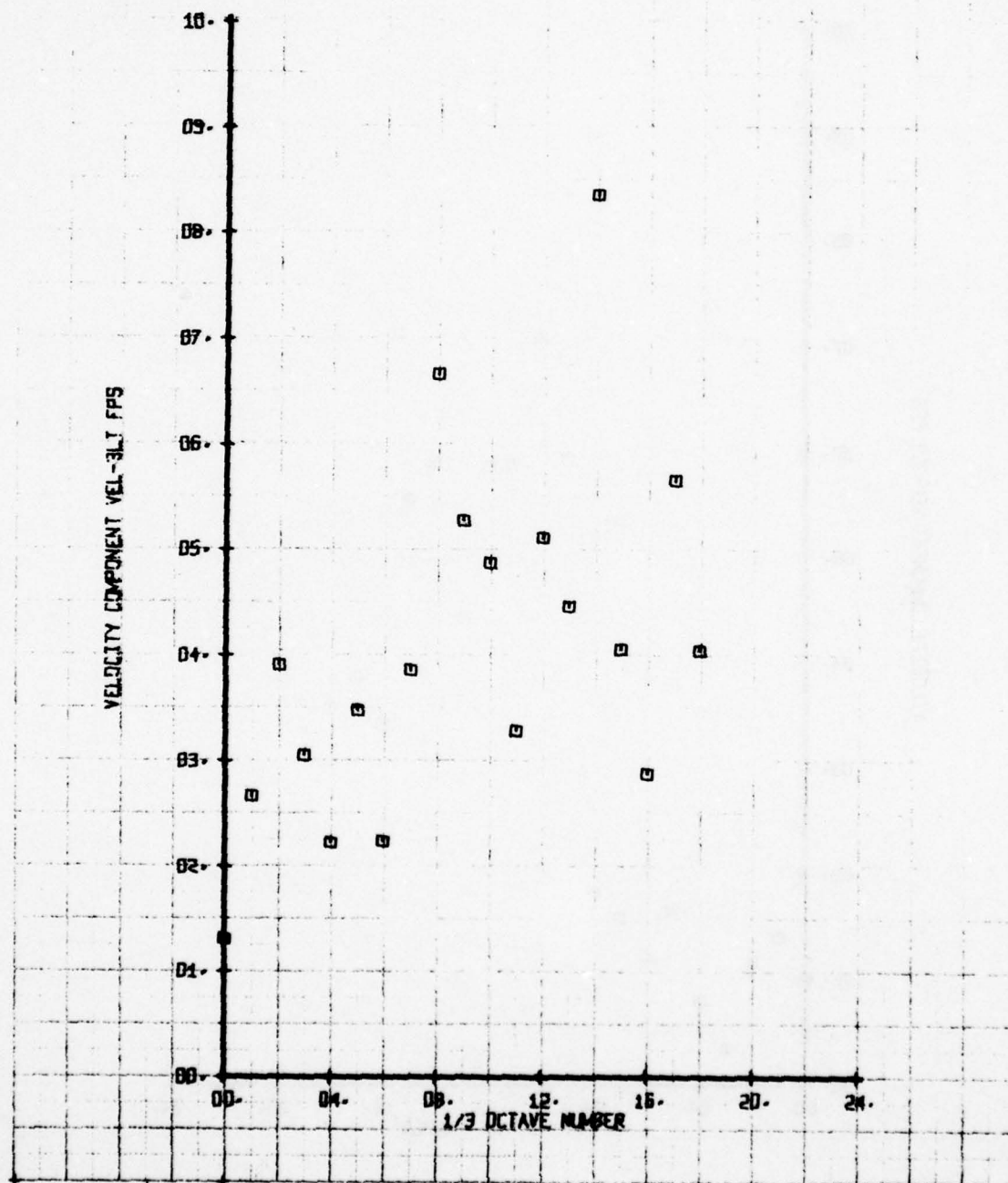
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECTOR W/C SHROUD-150 PSI  
 RUN 176 TP 1

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT

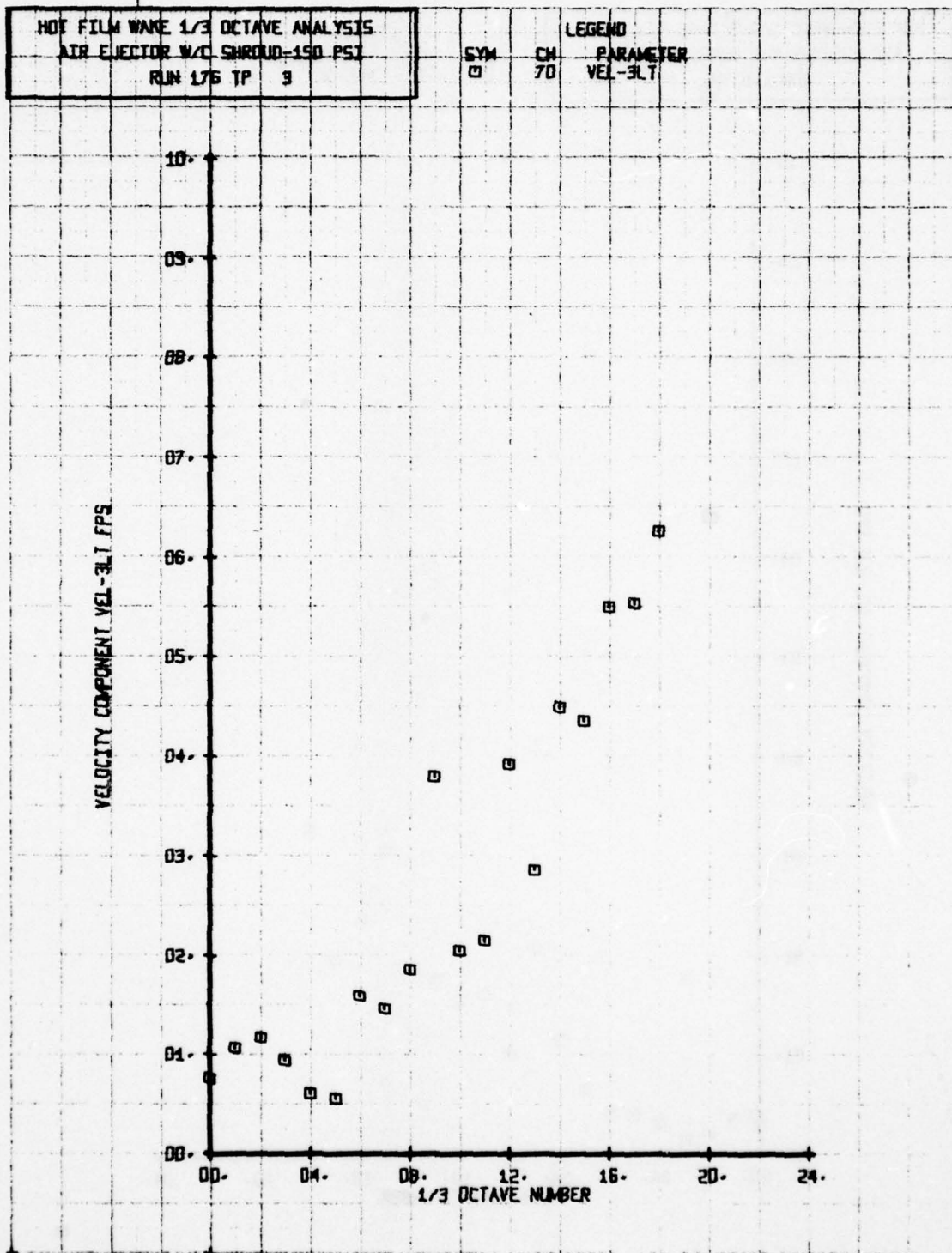


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECTOR W/C SHROUD-150 PSI  
 RUN 176 TP 2

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT







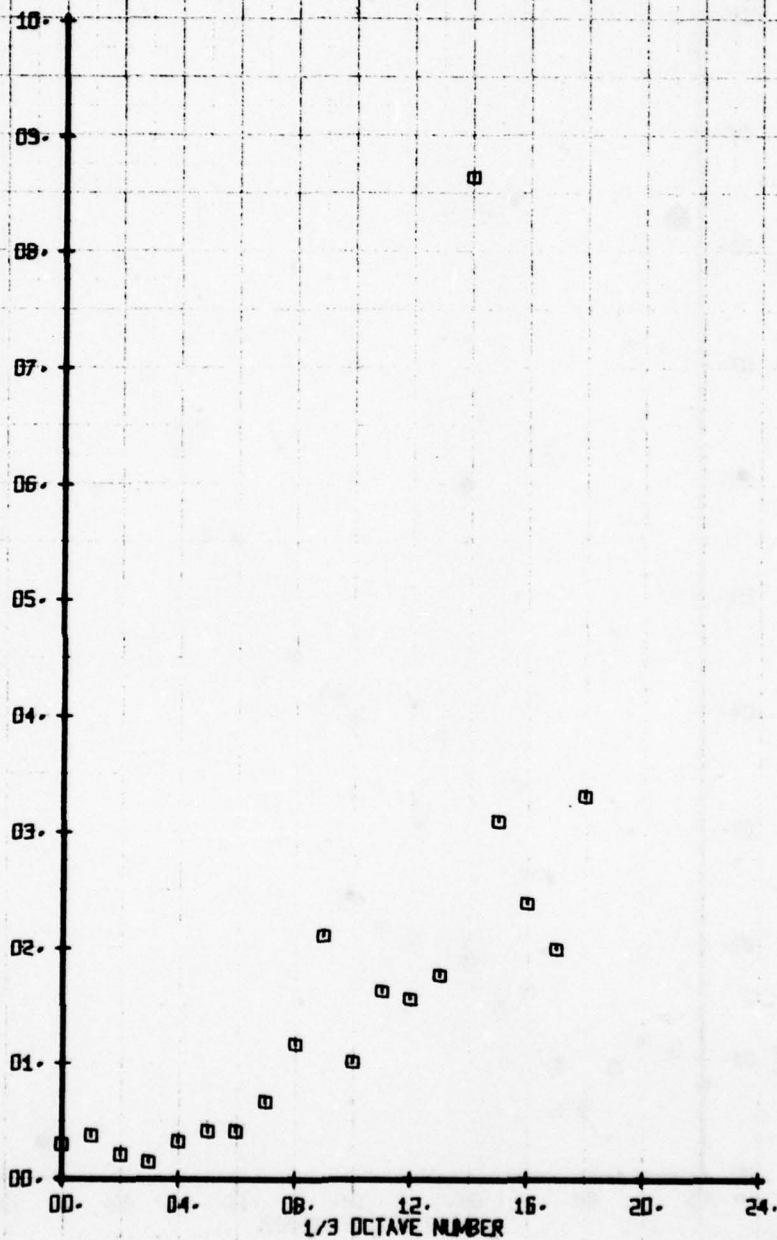
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECTOR W/O SHROUD-150 PSI  
 RUN 176 TP 4

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

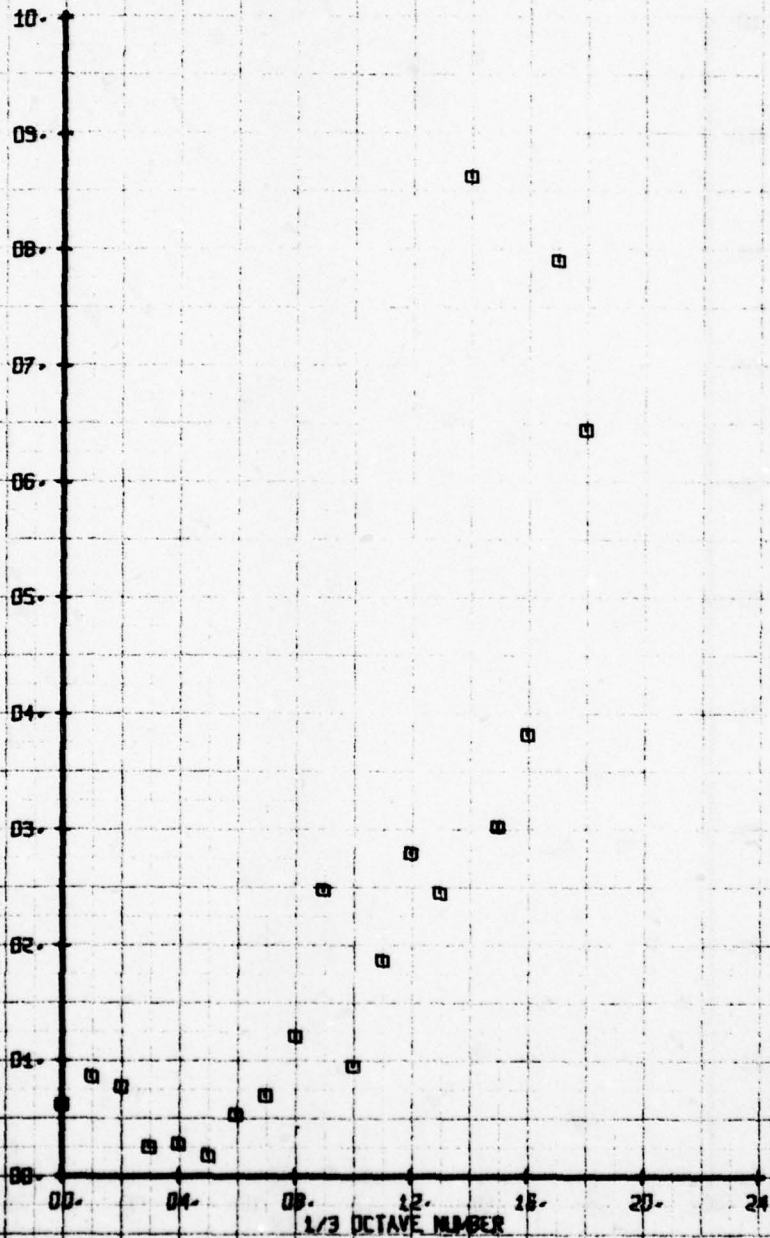


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECTOR W/C SHROUD-150 PSI  
RUN 176 TP 5

SYM  
□

LEGEND  
CH 70  
PARAMETER  
VEL-3LT

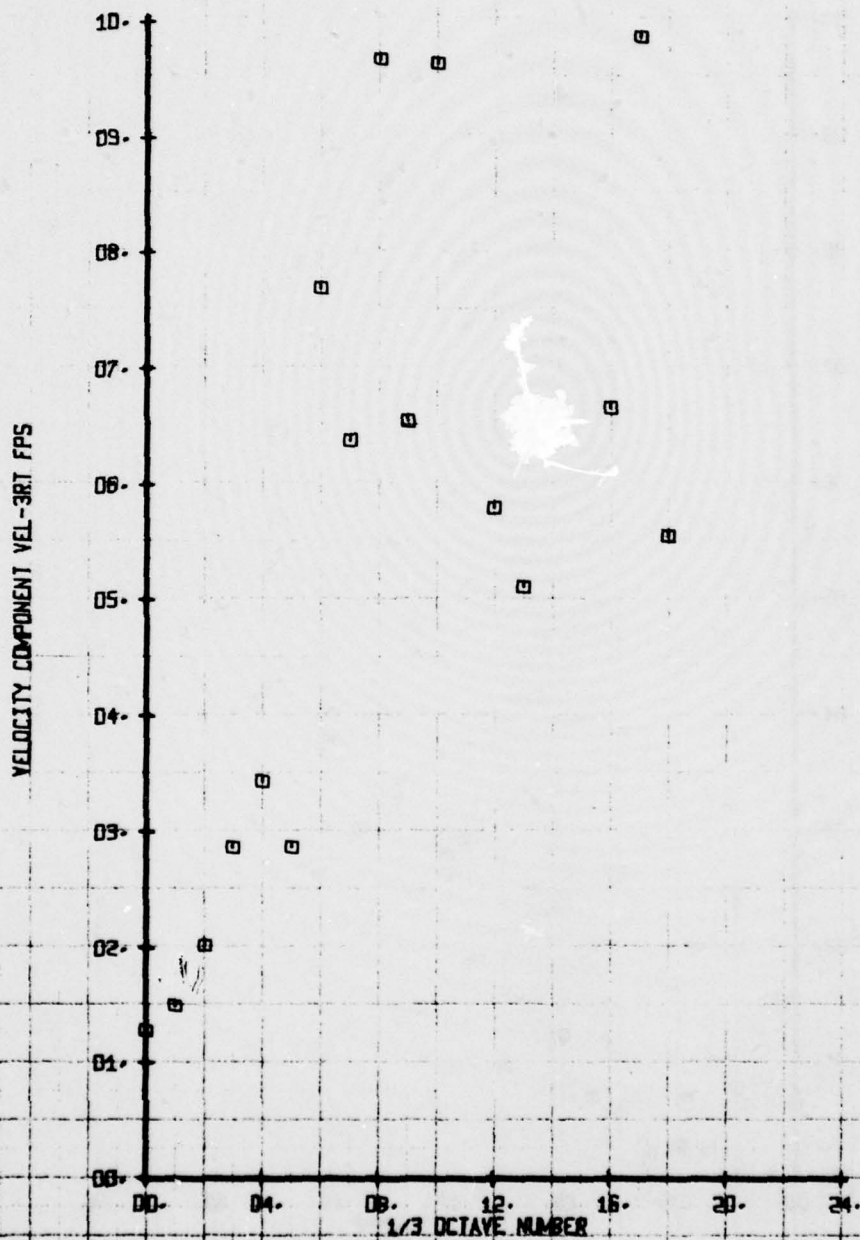
VELOCITY COMPONENT VEL-3LT FPS

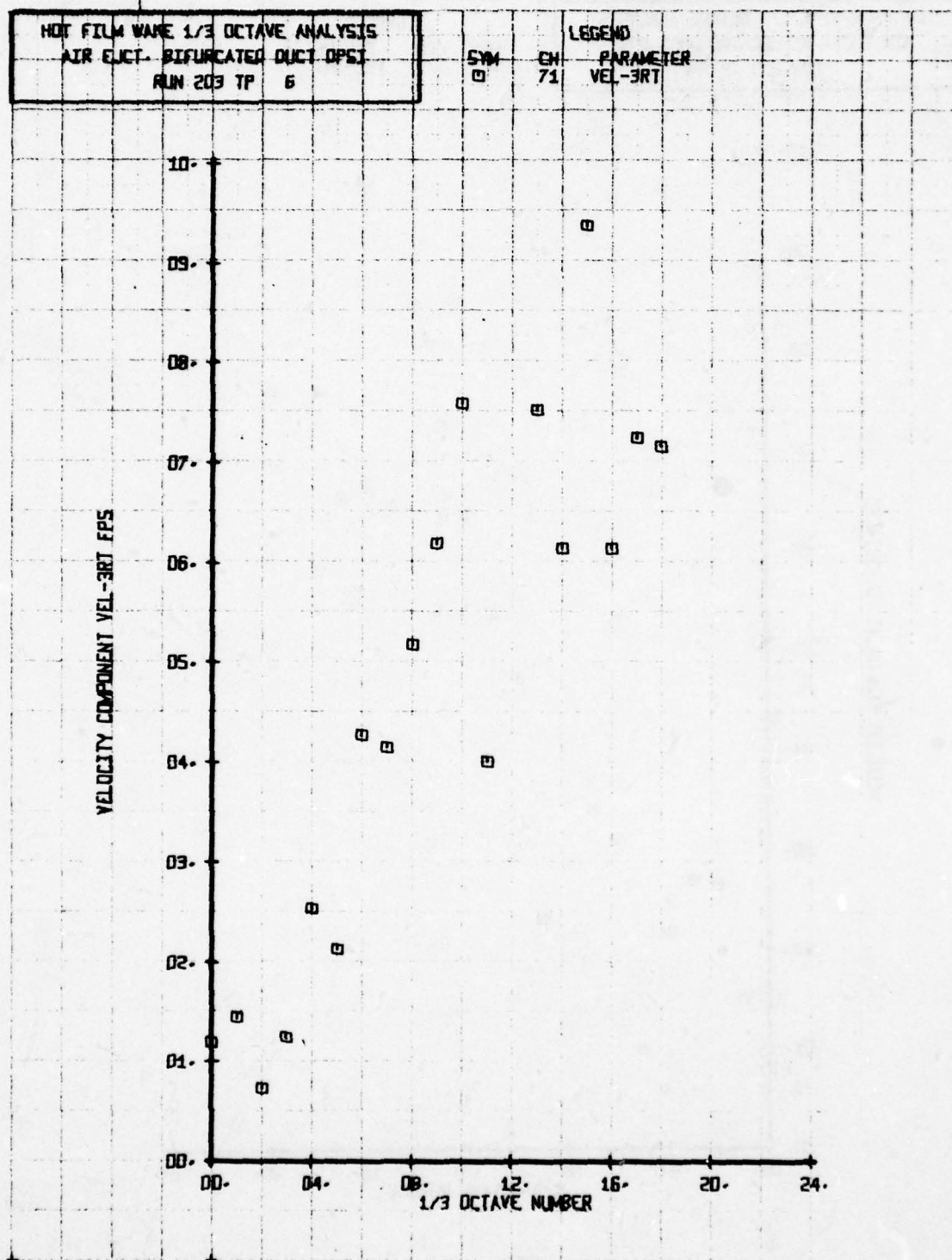




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT OPSI  
 RUN 203 TP 5

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT





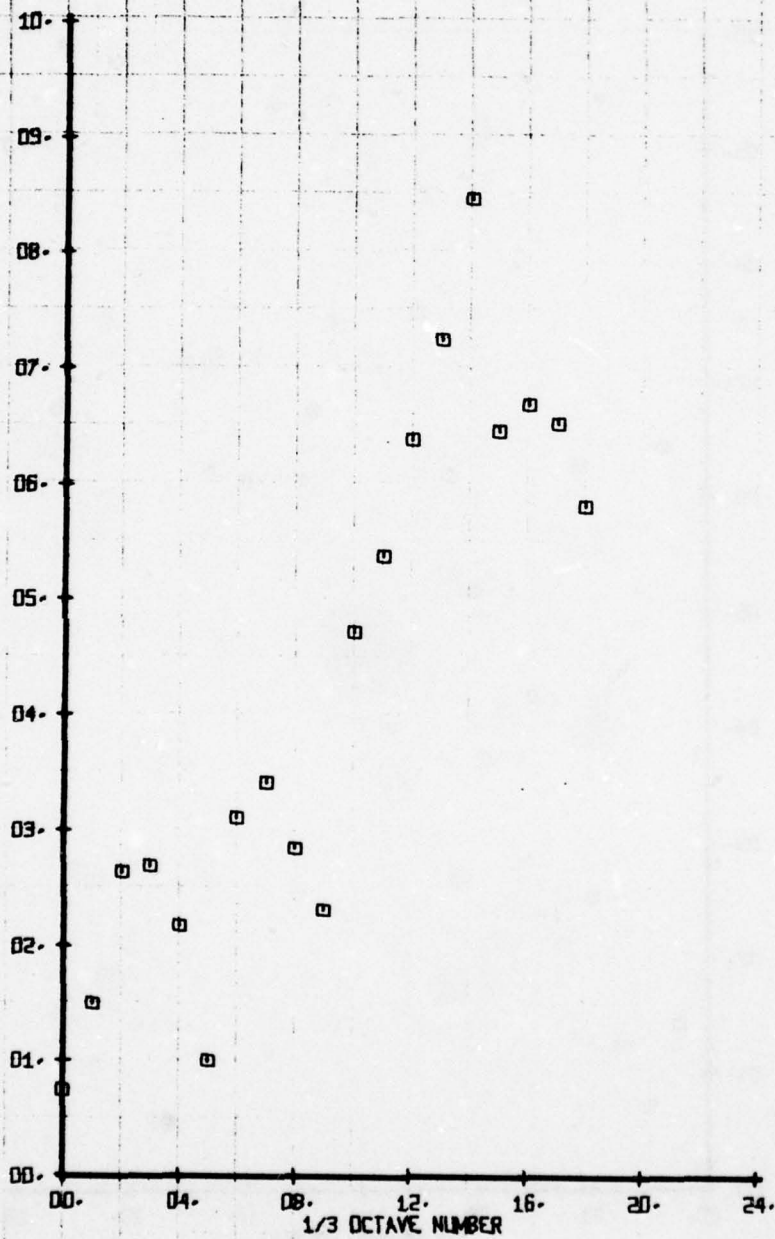
HOT FILM WARE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT OPS  
 RUN 203 TP 7

SYM  
 □

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



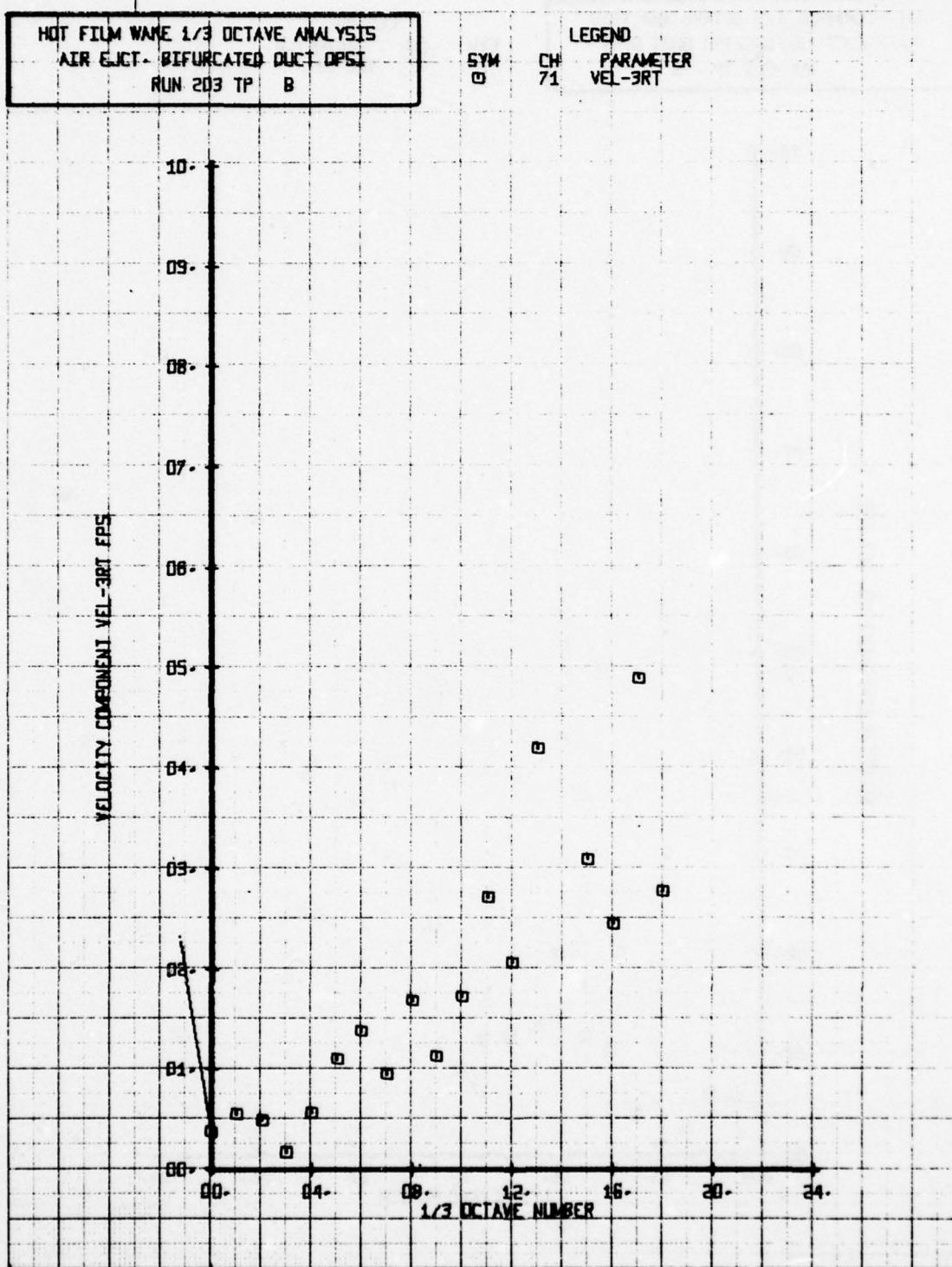


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT DPST  
 RUN 203 TP B

SYM  
 □

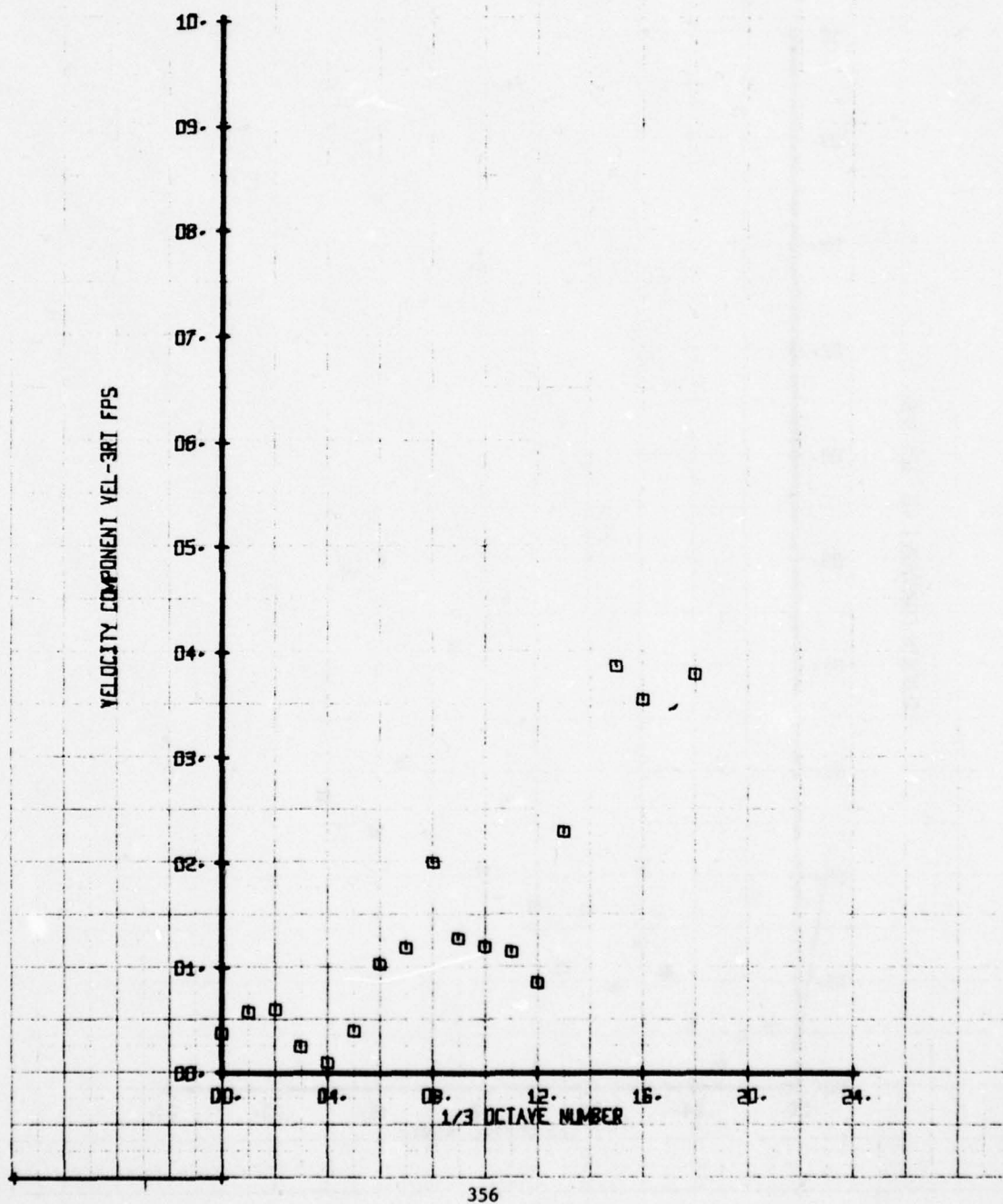
CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT OPSI  
RUN 203 TP 9

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



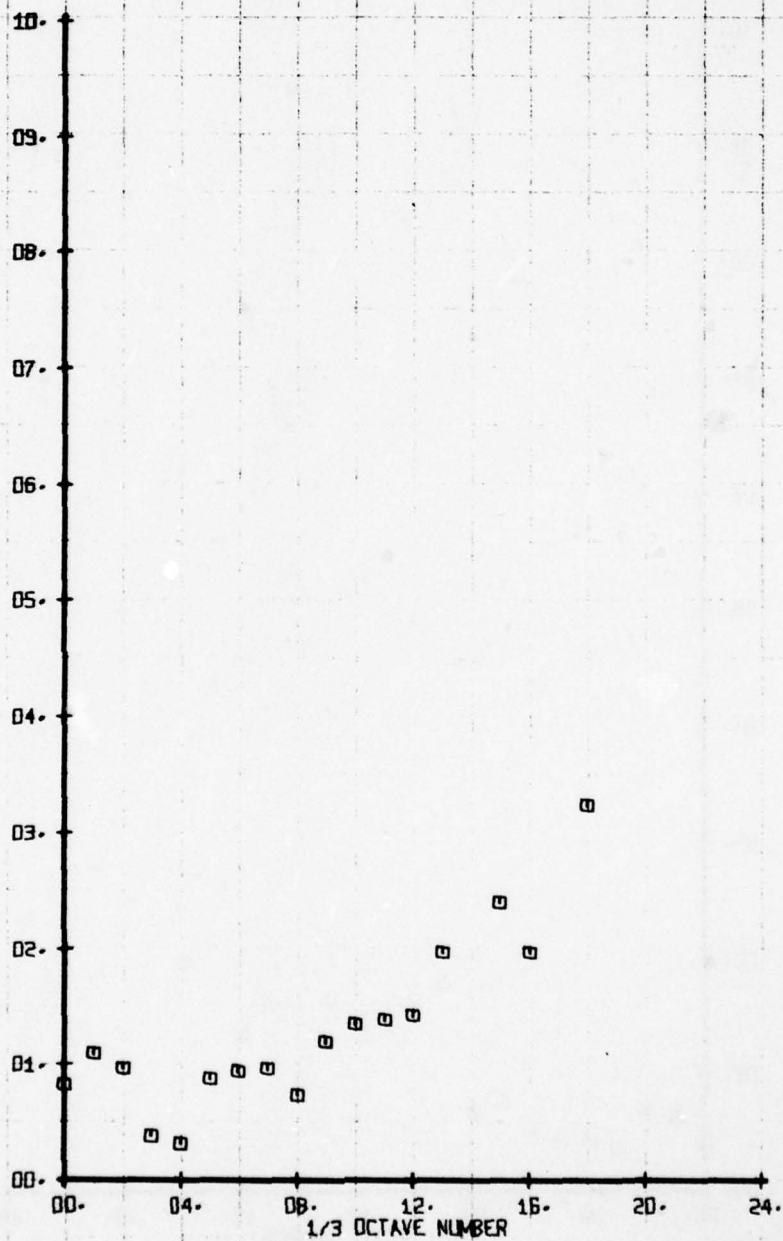
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT OPSJ  
 RUN 203 TP 10

SYM  
 □

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS





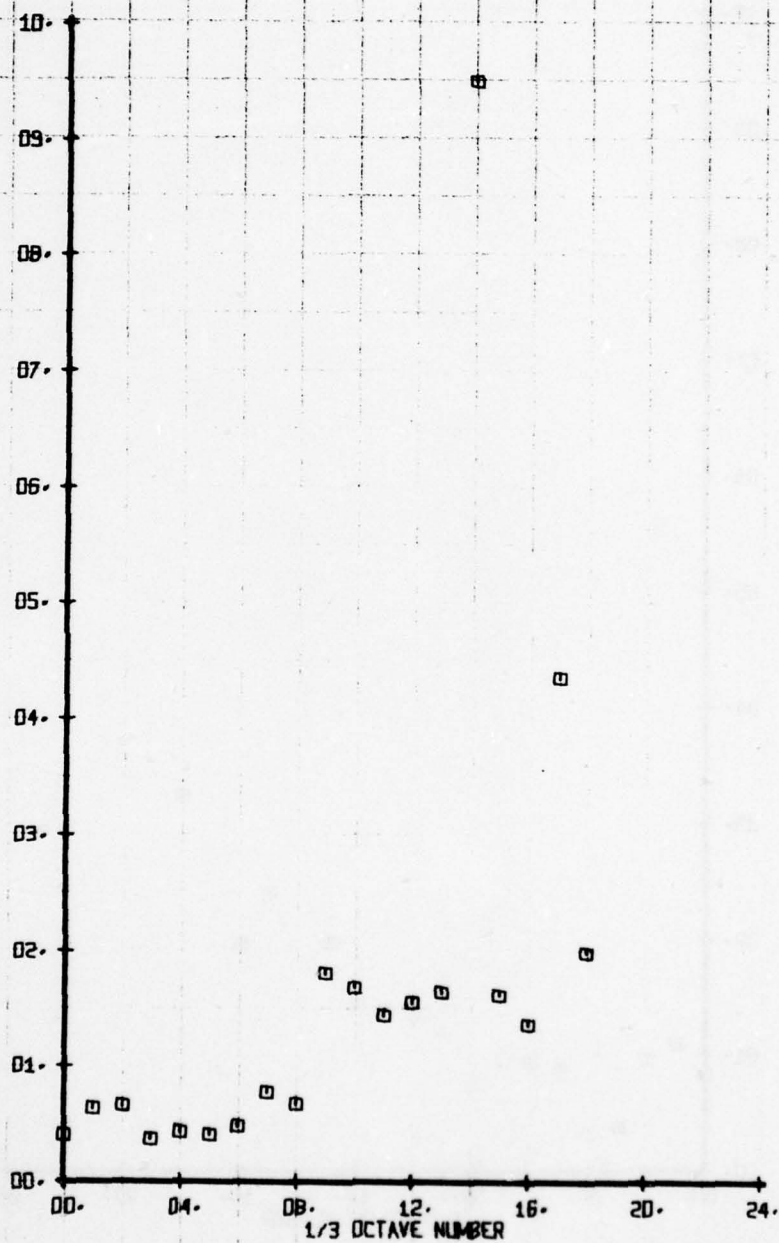
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT DP51  
RUN 203 TP 11

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

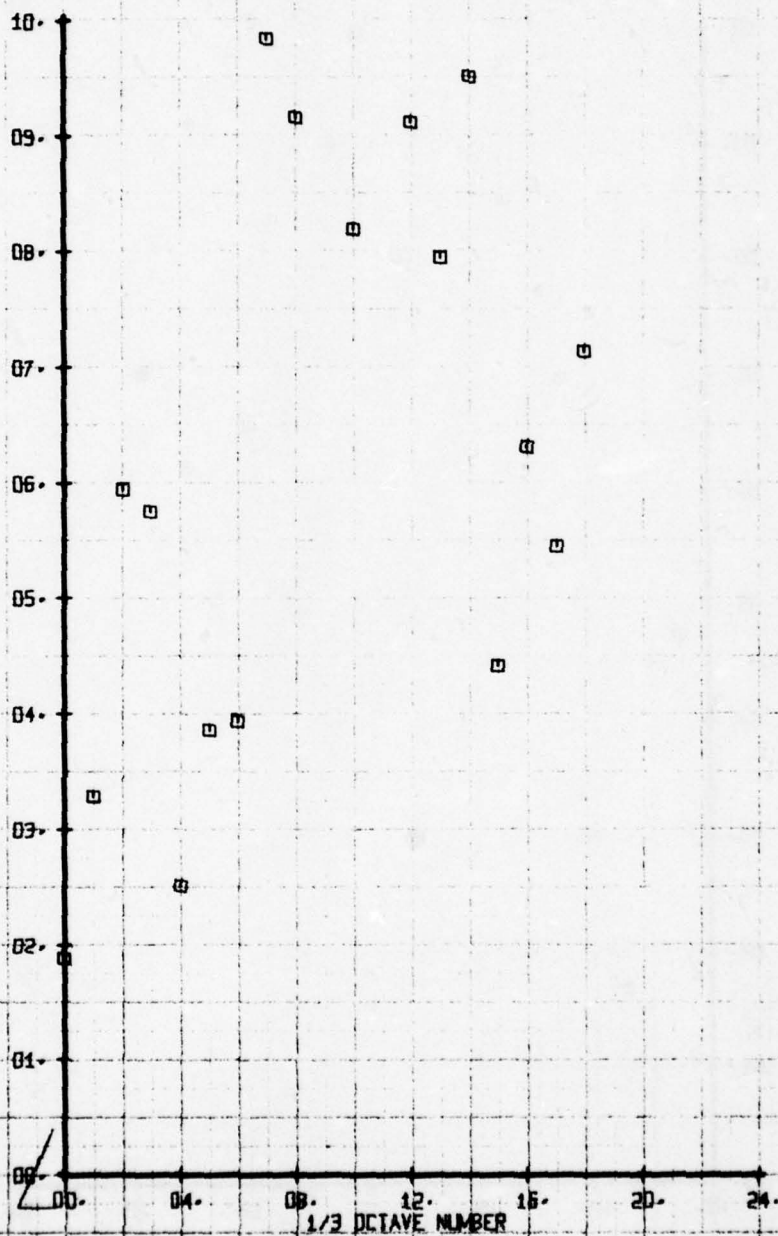


HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT OPSI  
RUN 203 TP 5

SYM  
□

LEGEND  
CH 70  
PARAMETER  
VEL-3LT

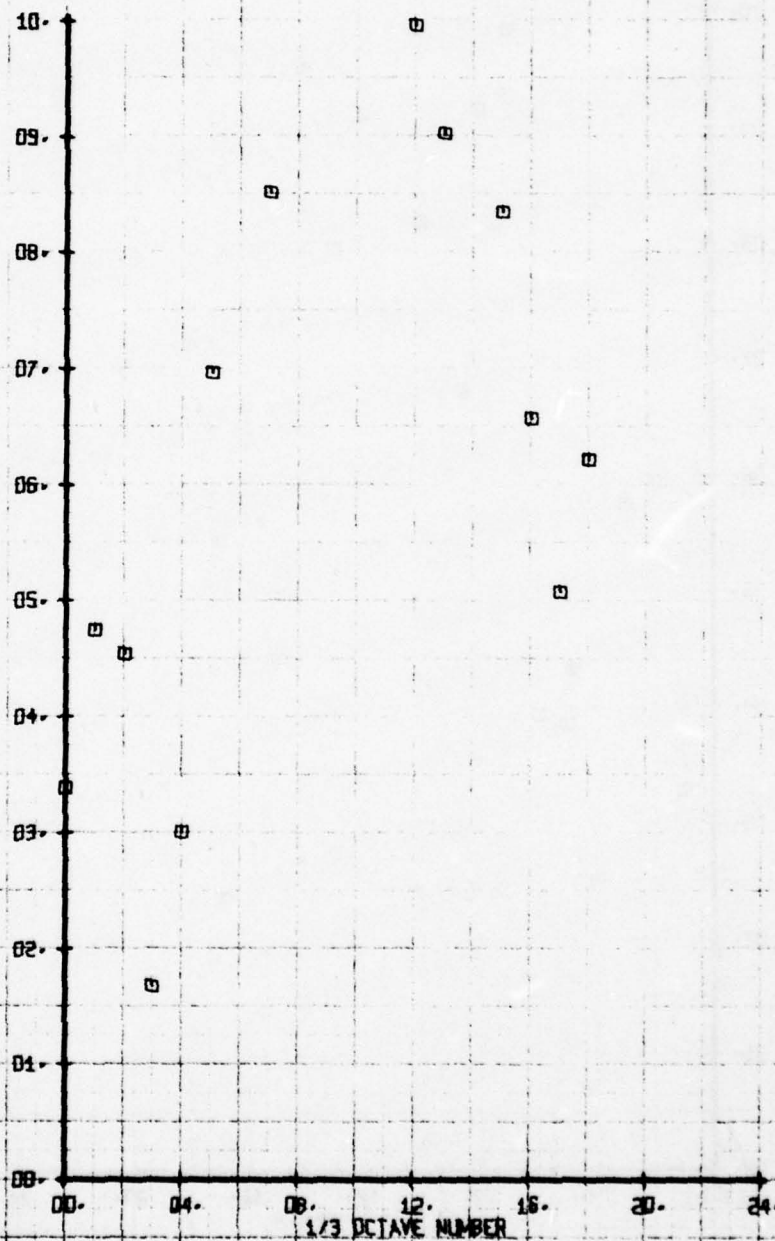
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT OPSI  
 RUN 203 TP 6

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





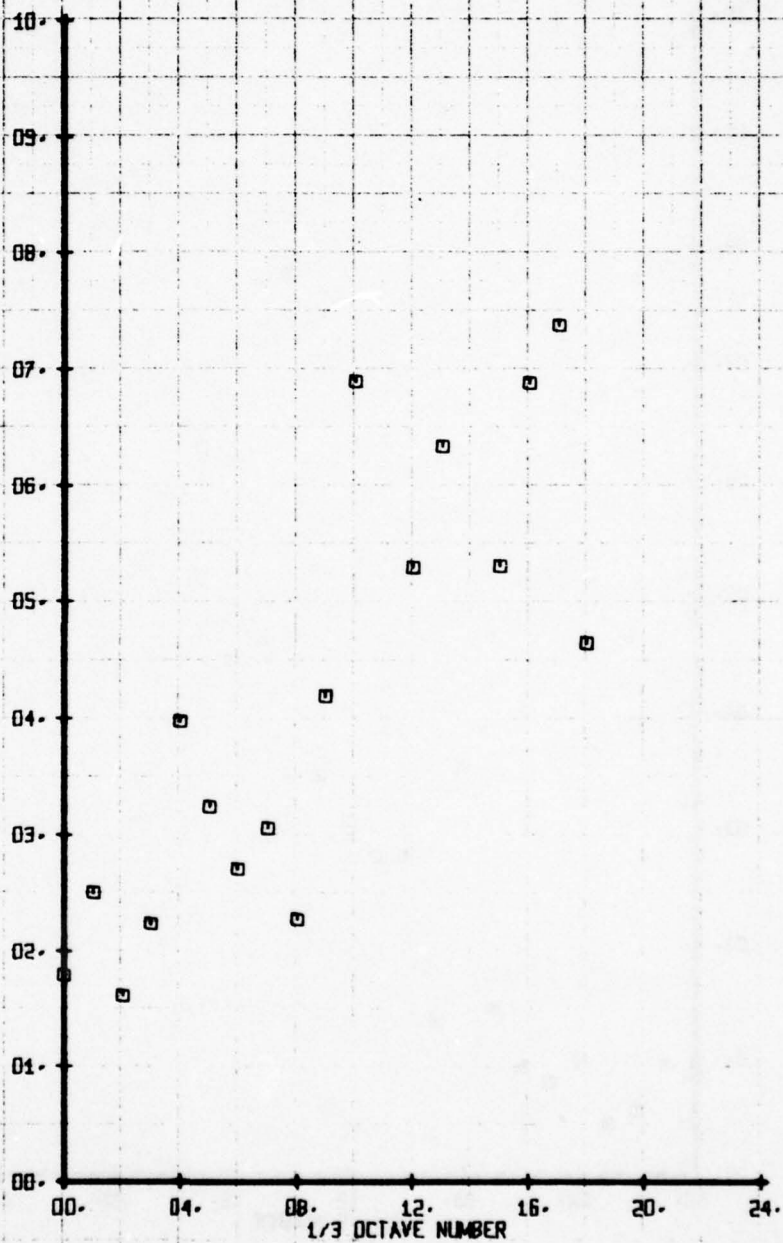
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT OPST  
RUN 203 TP 7

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



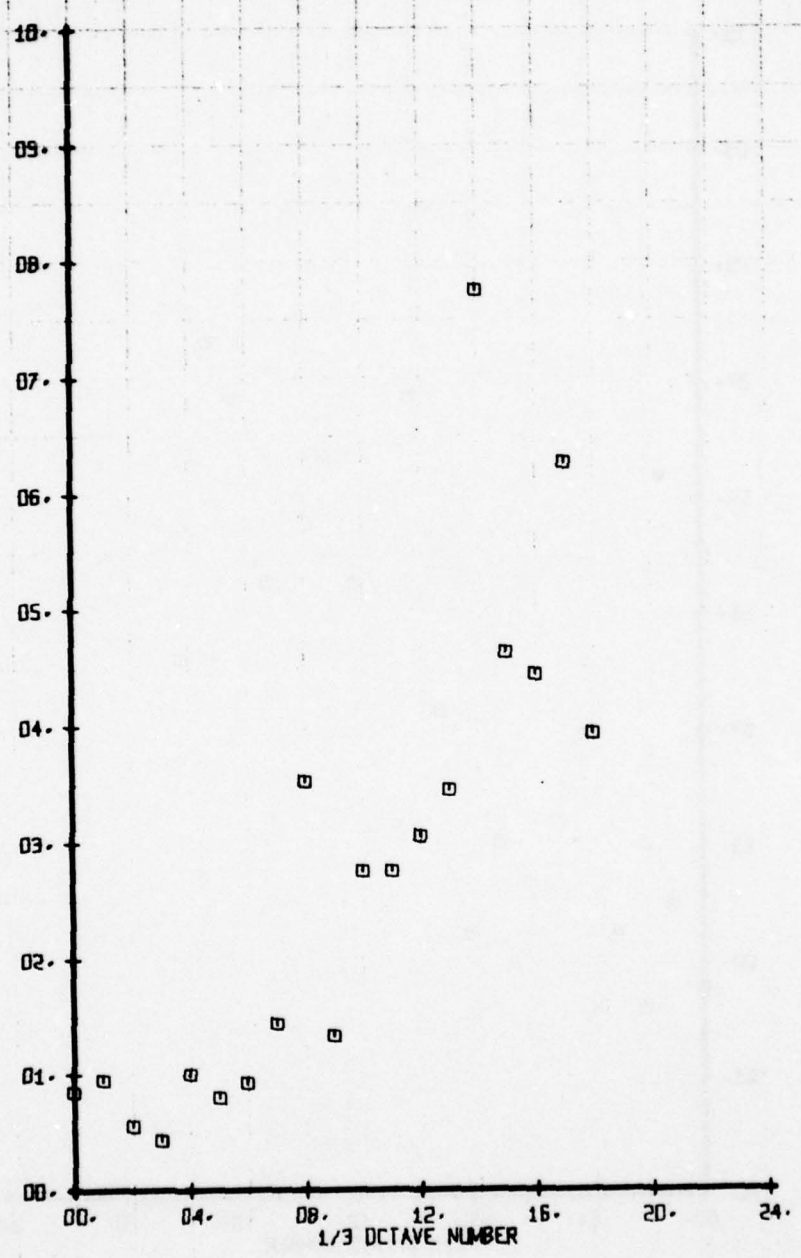
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT OPS1  
 RUN 203 TP B

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



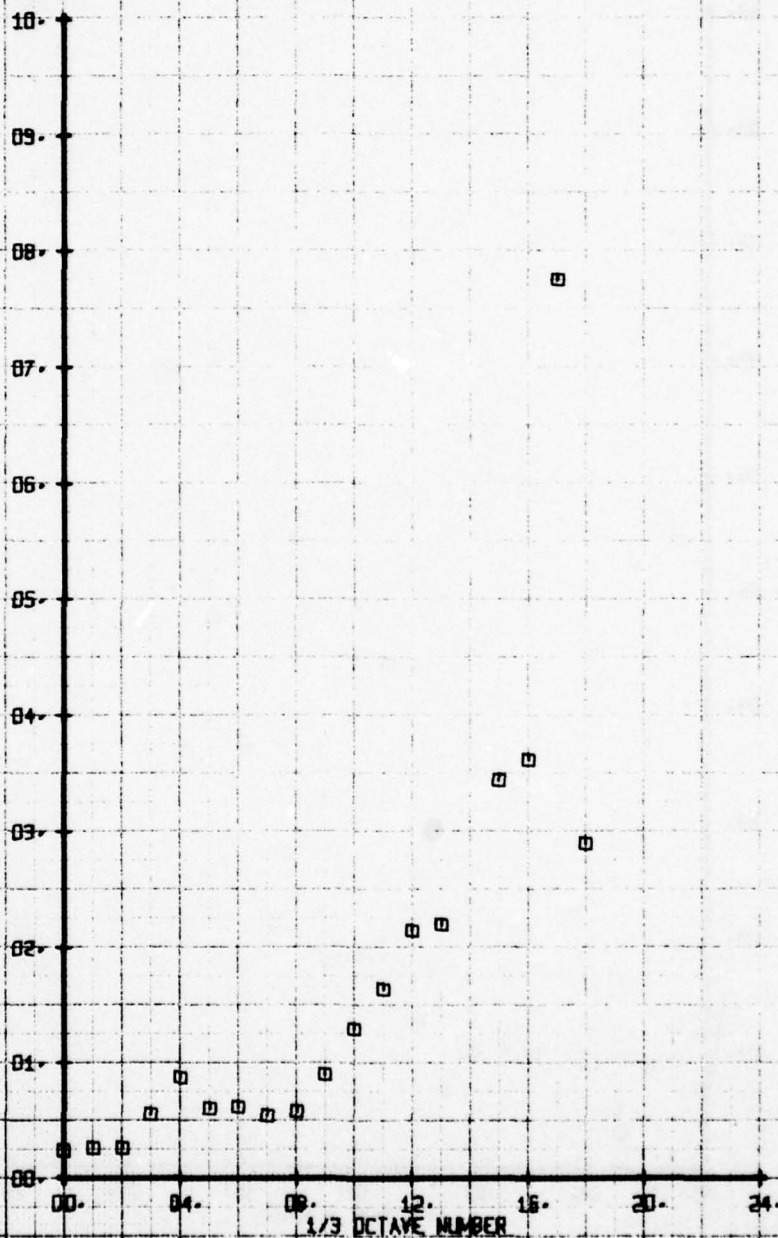
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT OPSJ  
 RUN 203 TP 9

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

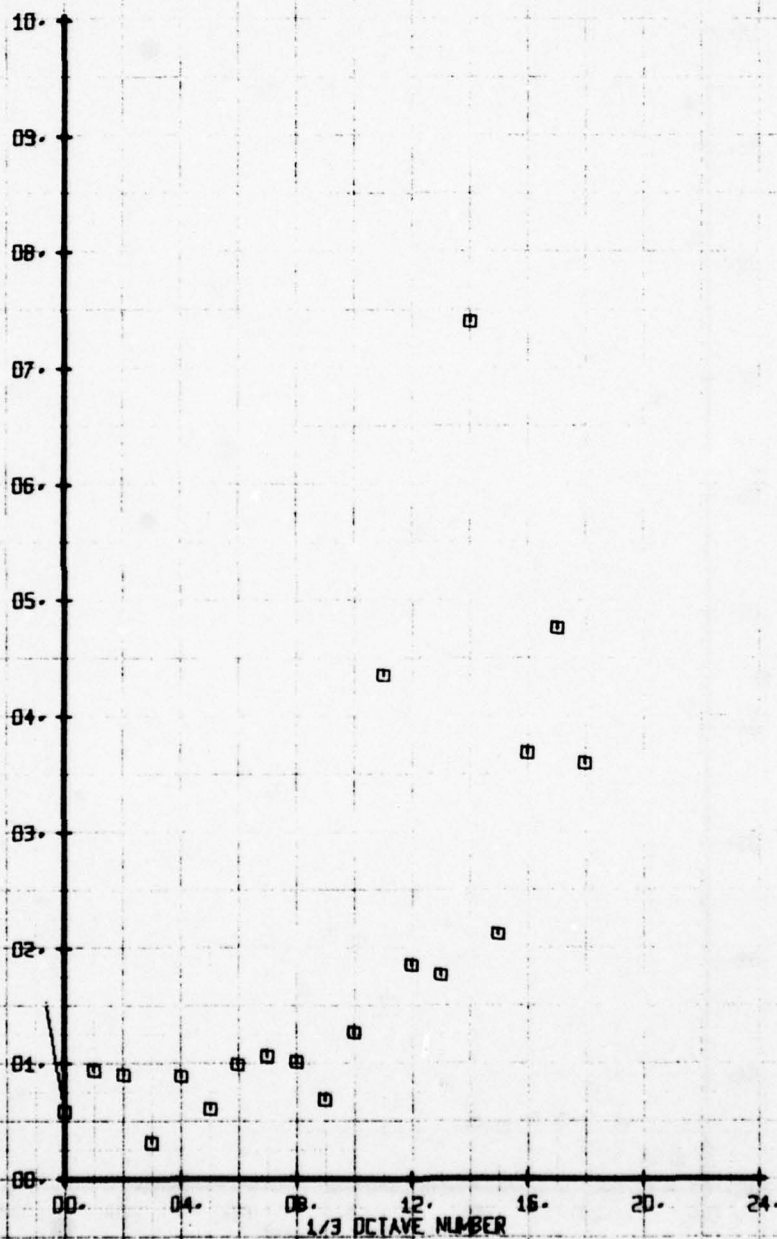




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT OPS1  
RUN 203 TP 10

LEGEND	
SYM	CH
□	70
PARAMETER	
VEL-3LT	

VELOCITY COMPONENT VEL-3LT FPS



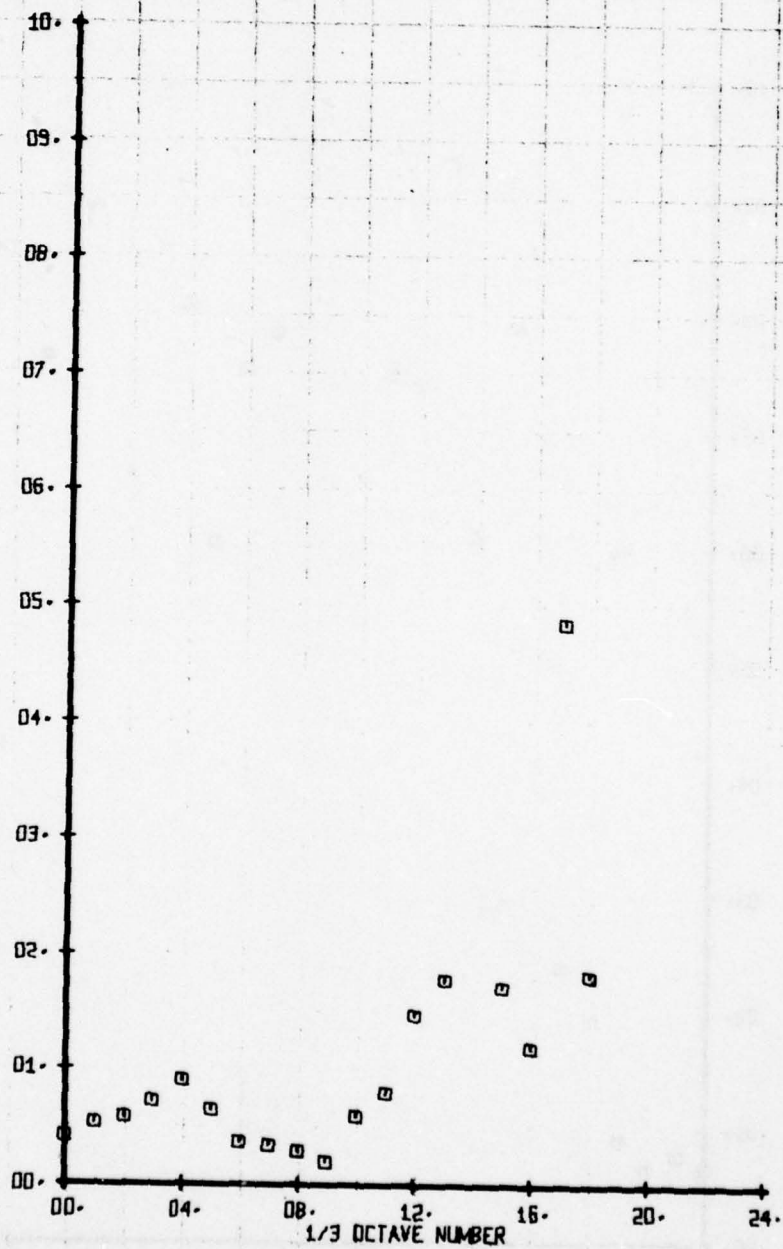
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT OPSJ  
RUN 203 TP 11

SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



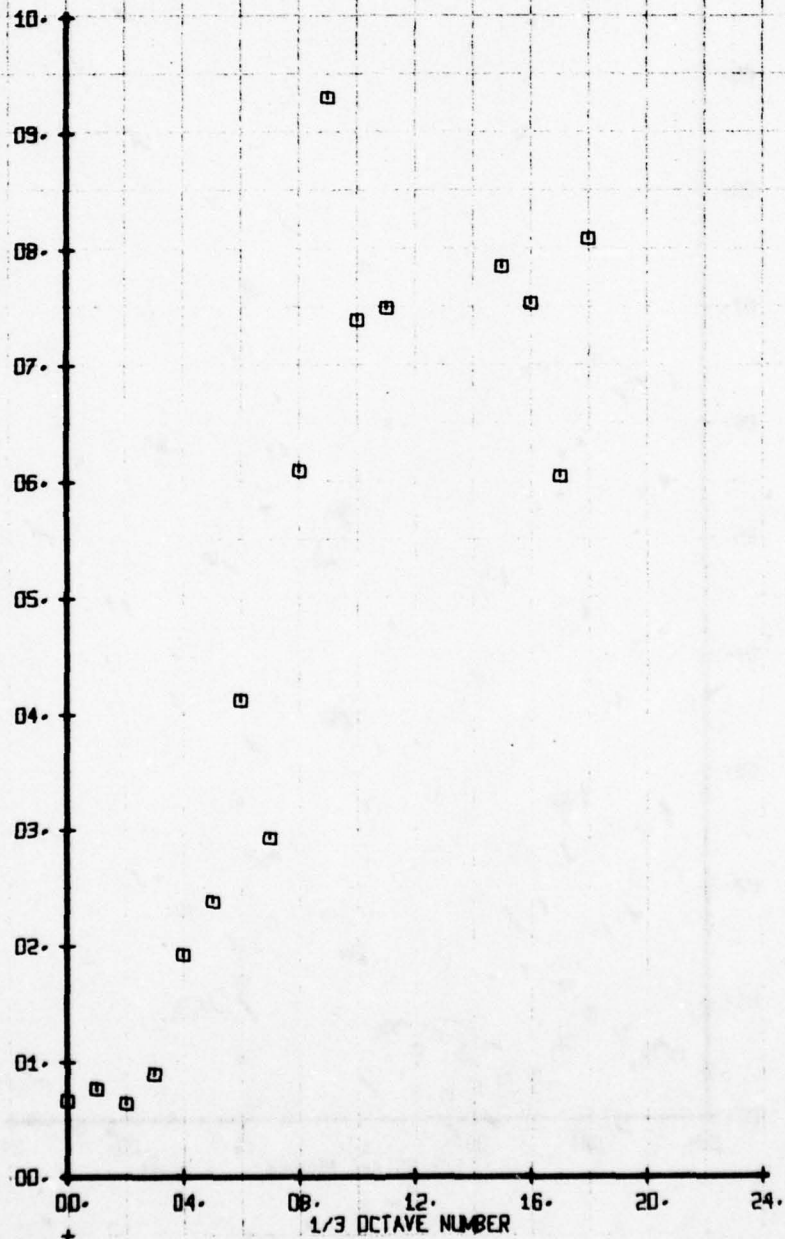
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT 150PSI  
RUN 205 TP 1

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

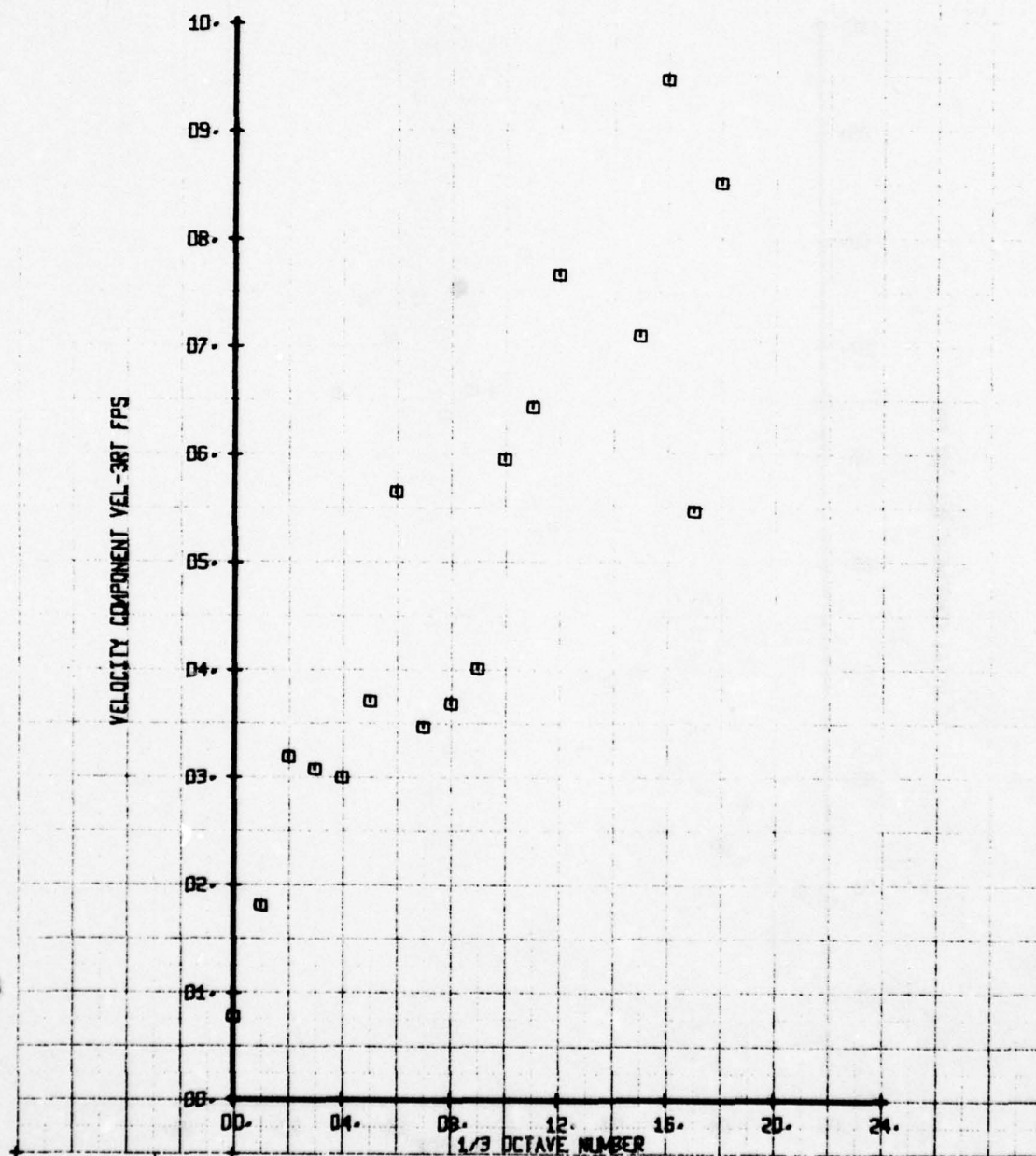




HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJCT. BIFURCATED DUCT 150PSI  
RUN 205 TP 2

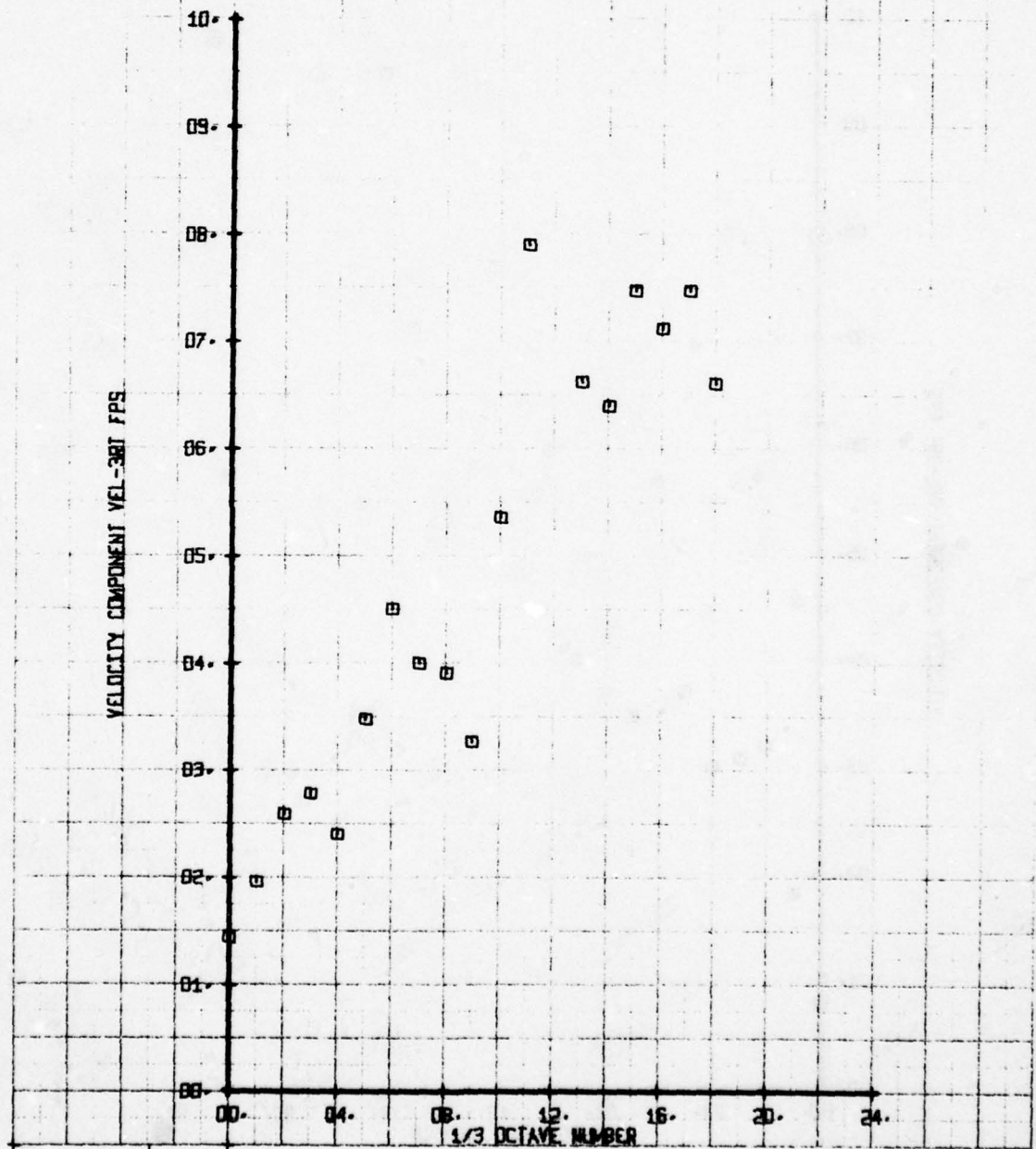
SYM  
□

LEGEND  
CH 71  
PARAMETER  
VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT 150PSI  
 RUN 205 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 71 VEL-3RT



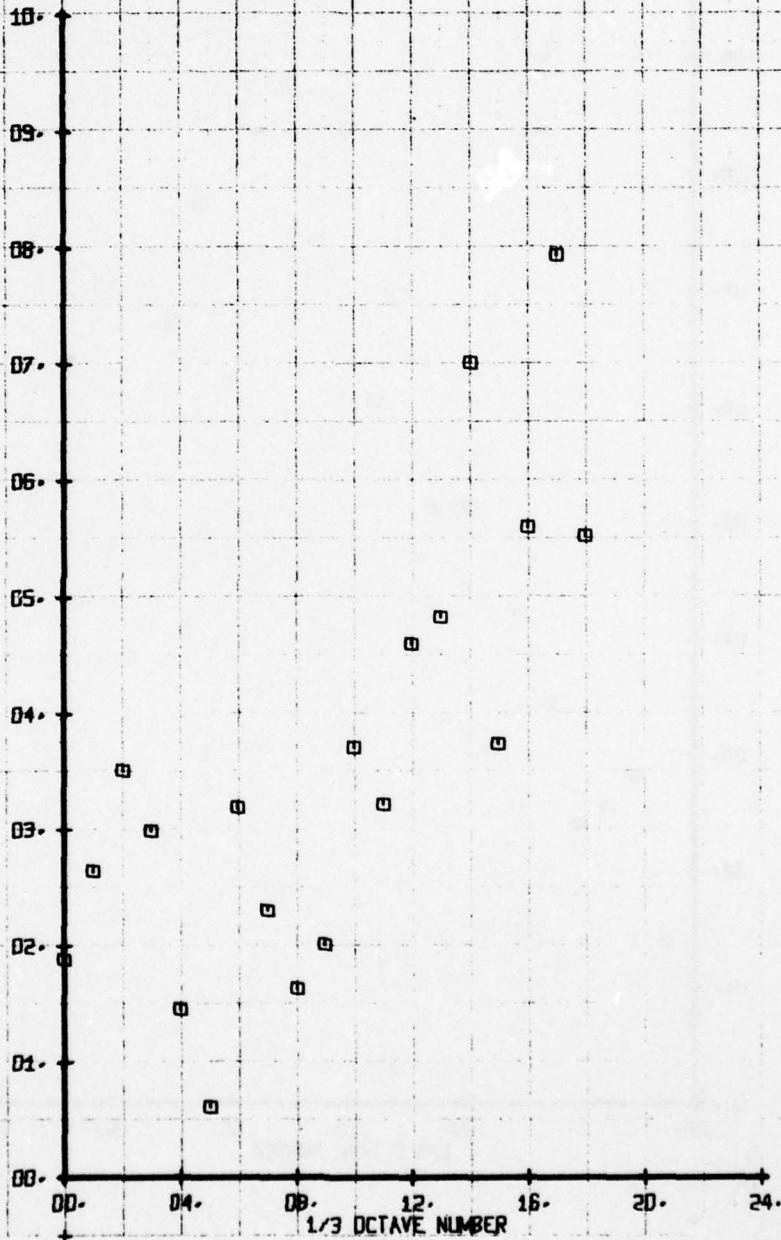
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT 450PSI  
 RUN 205 TP 4

SYM  
 □

CM  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS





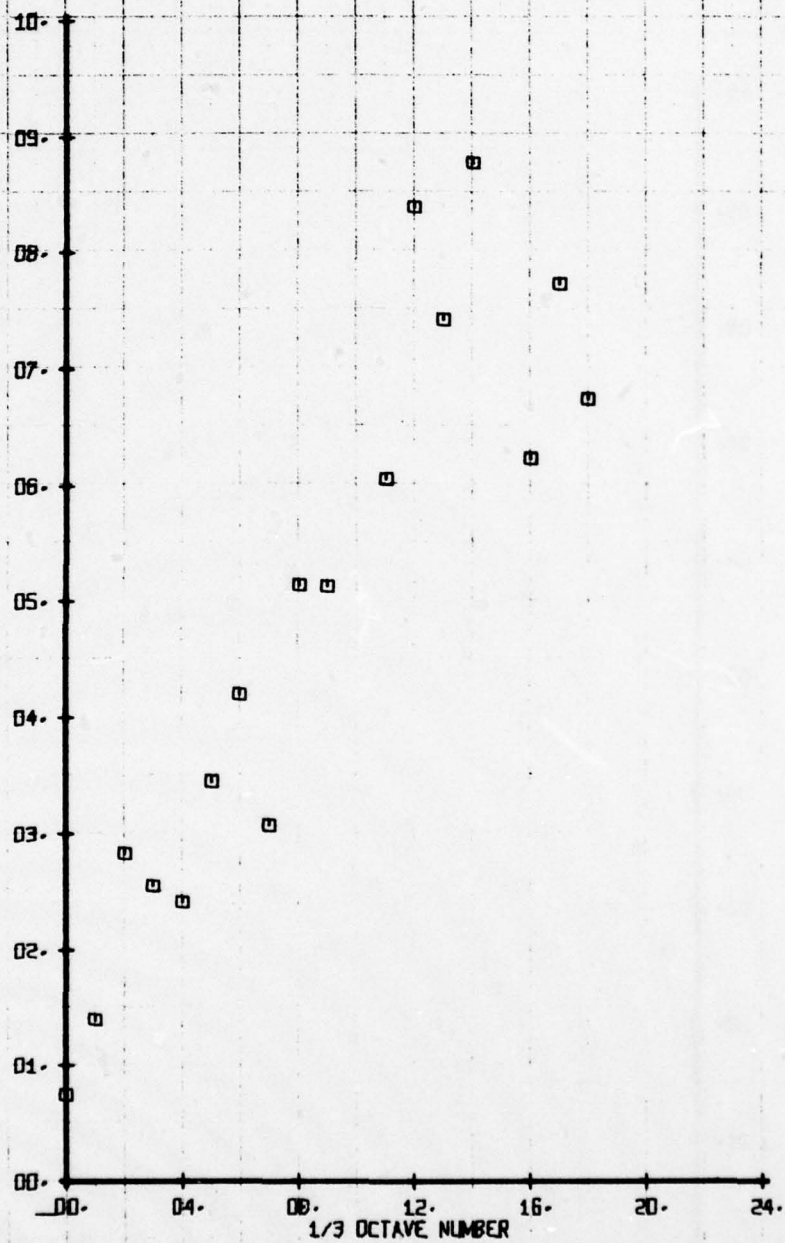
HOT FILM WAVE 1/3 OCTAVE ANALYSIS  
 AIR EJECT - BIFURCATED DUCT 150PSI  
 RUN 205 TP 1

SYM  
 0

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

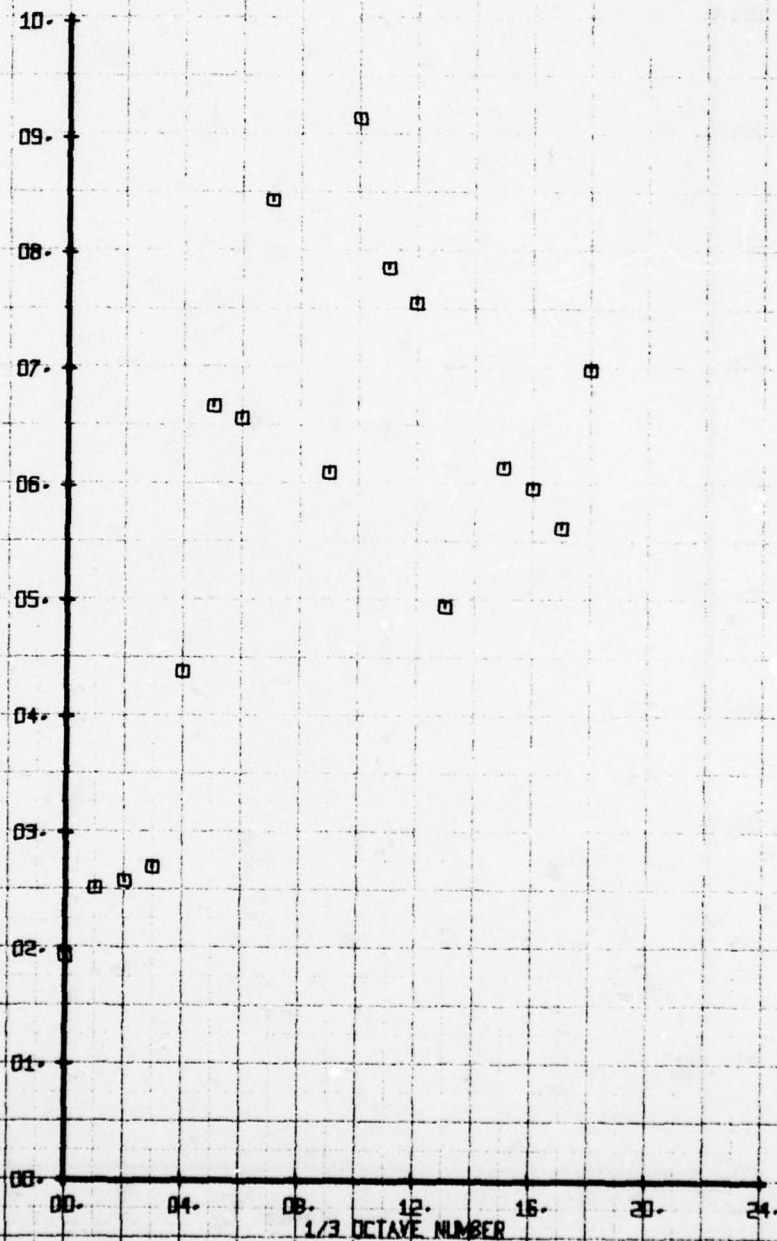
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT 150PSI  
 RUN 205 TP 2

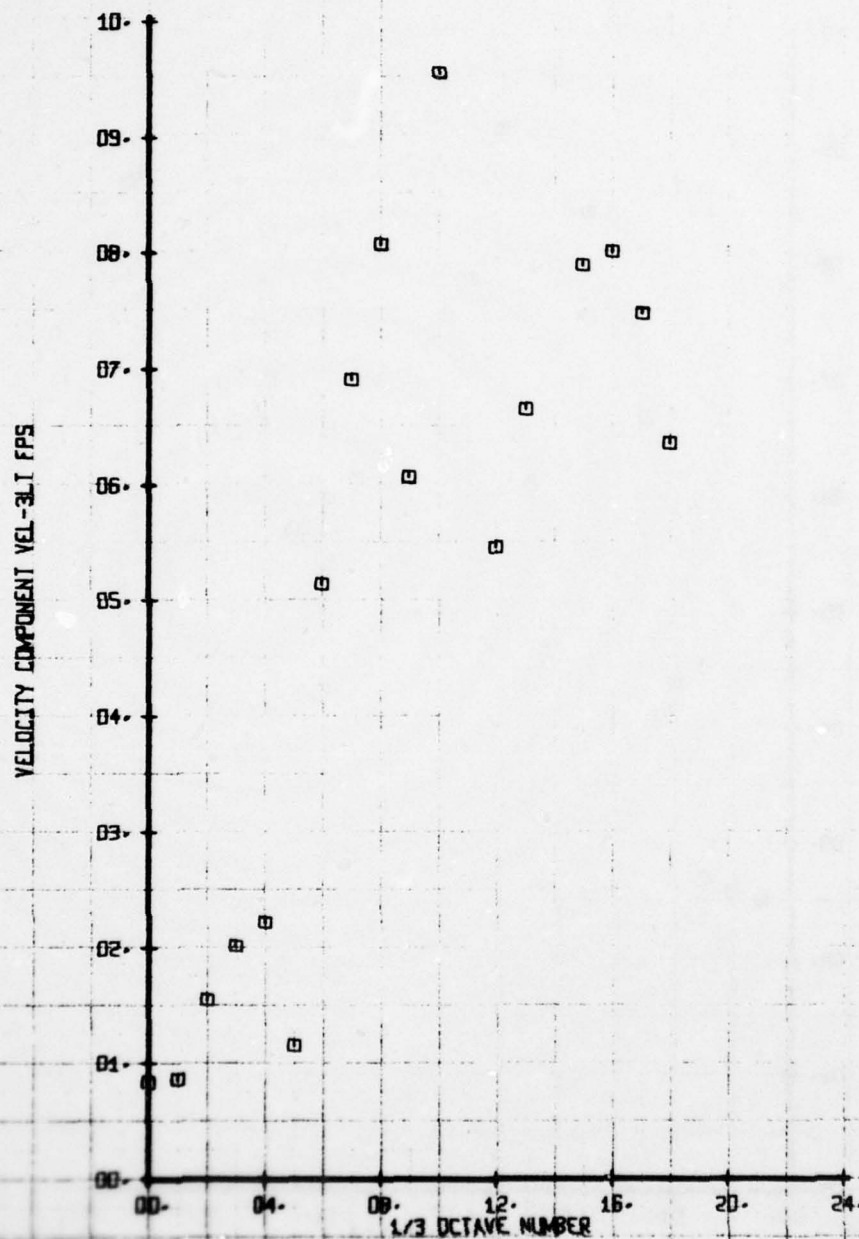
SYN CH PARAMETER  
 0 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. BIFURCATED DUCT 150PSI  
 RUN 205 TP 3

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT





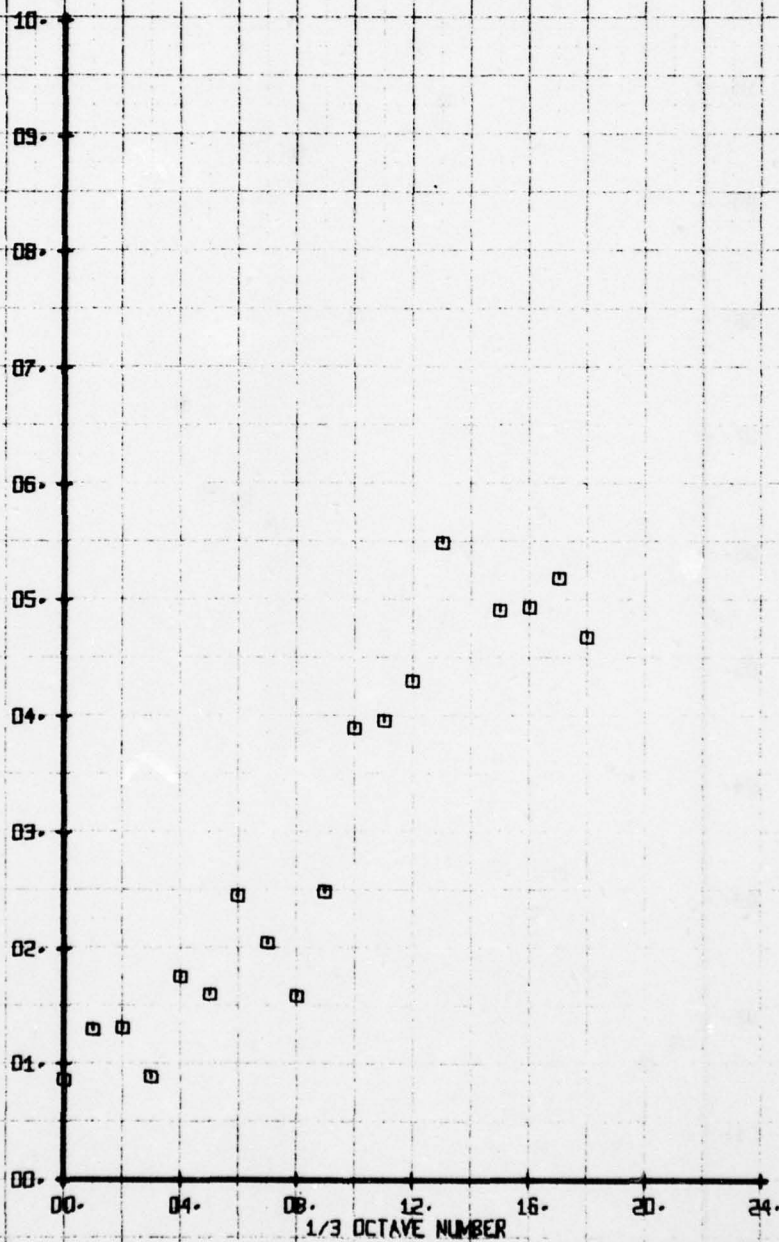
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. BIFURCATED DUCT 150PSI  
RUN 205 TP 4

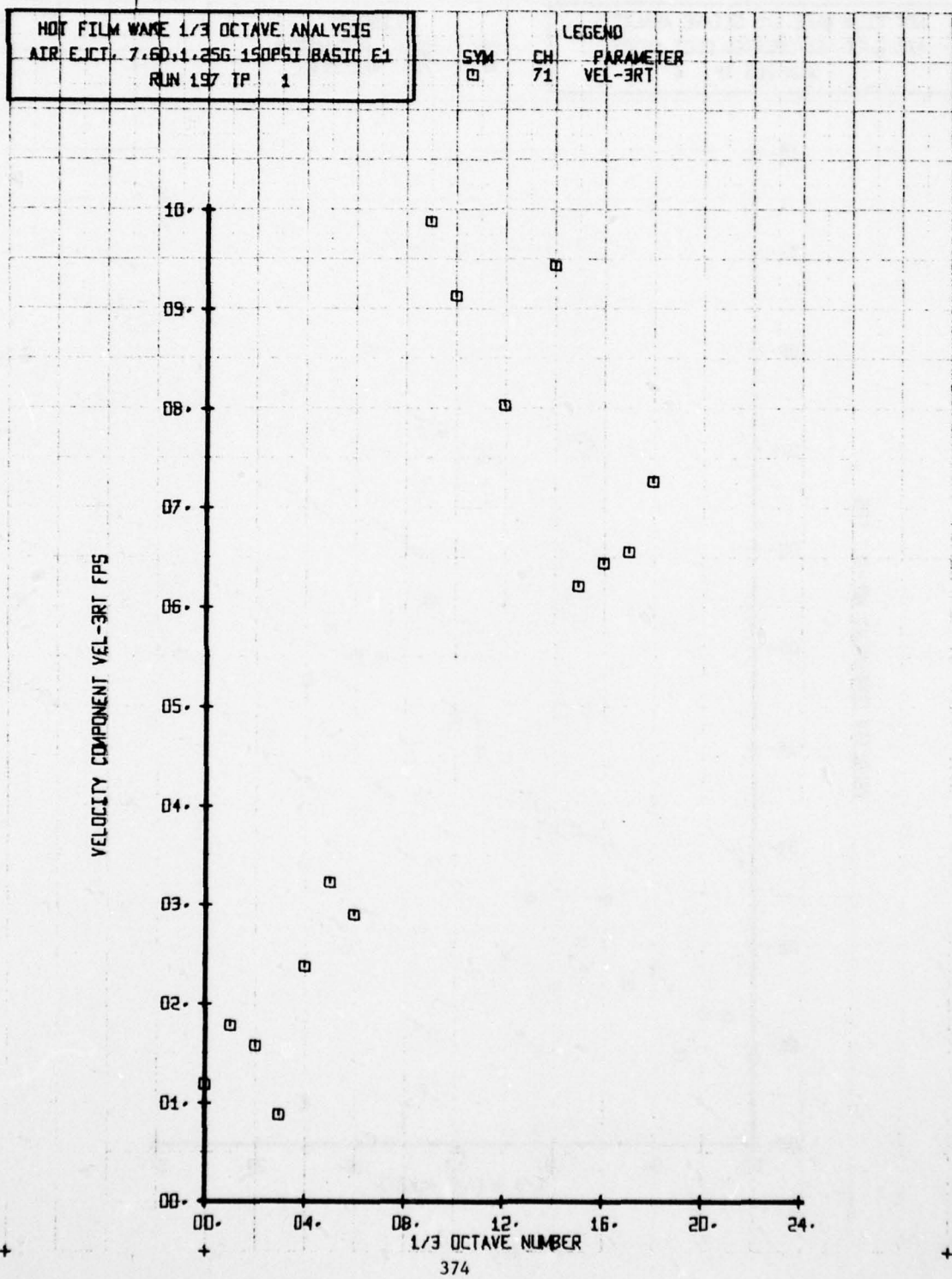
SYM  
□

CH  
70

LEGEND  
PARAMETER  
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





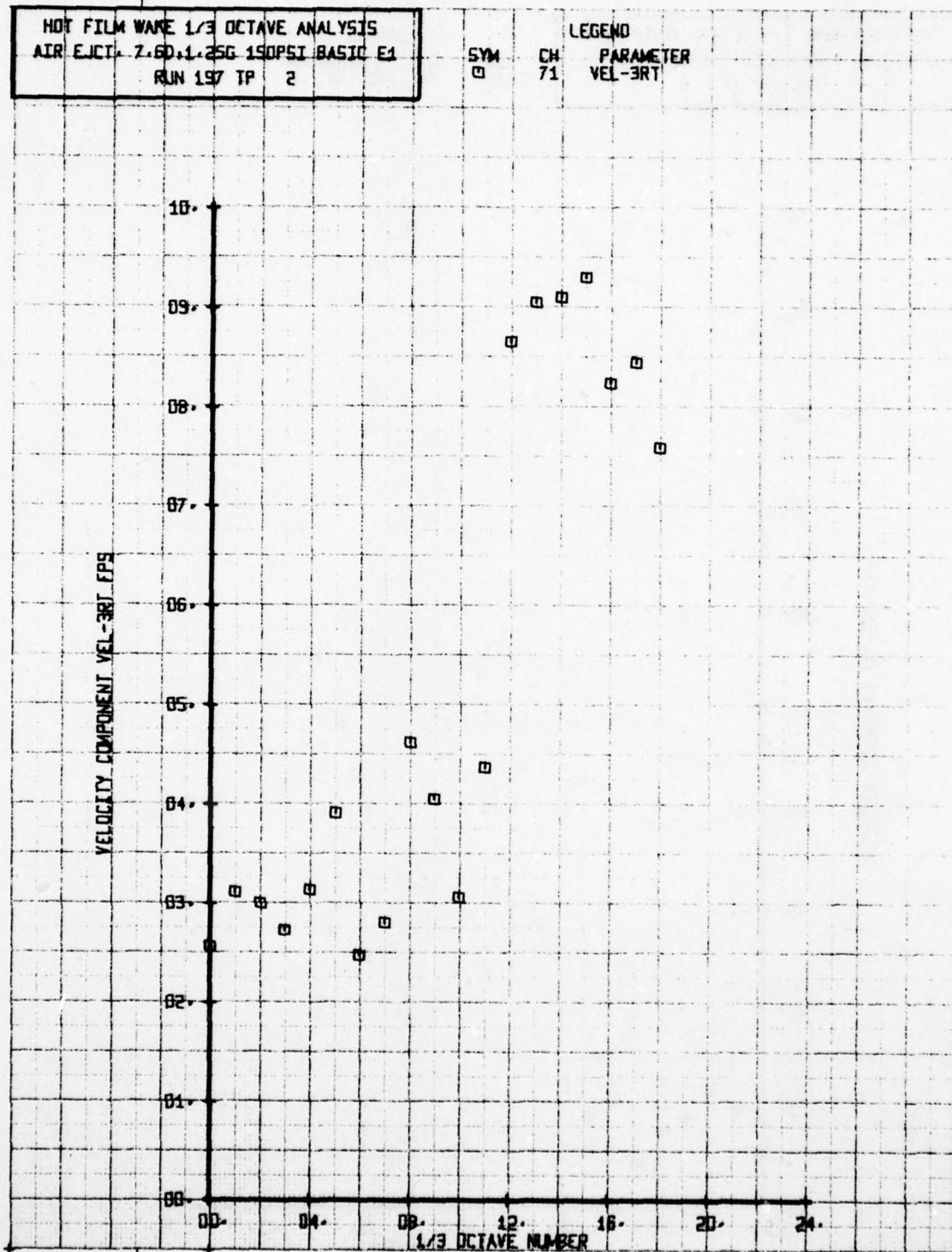
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT 7.60, 1.25G 150PSI BASIC E1  
 RUN 197 TP 2

SYM  
 □

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

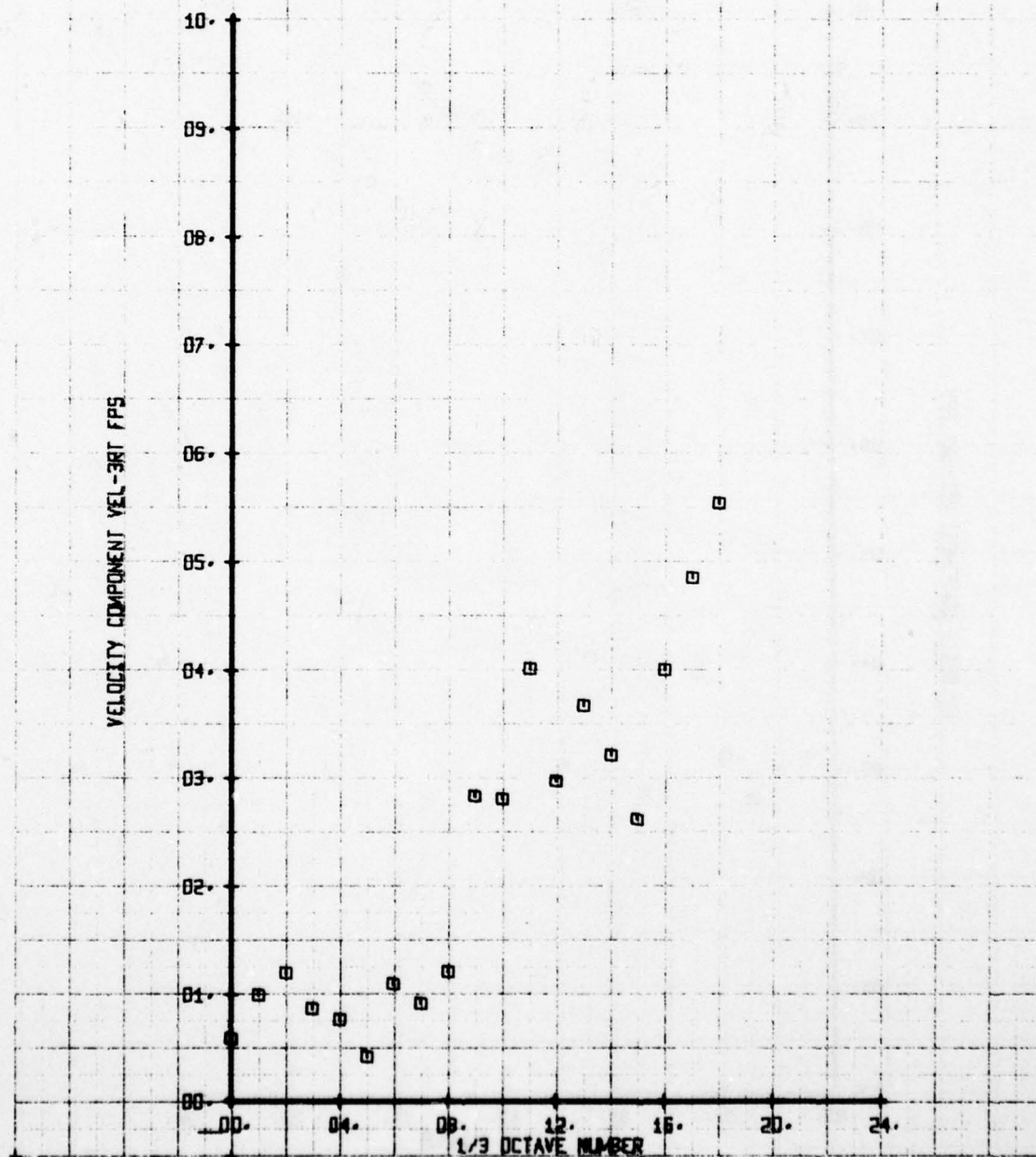
VELOCITY COMPONENT VEL-3RT FPS





HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. 7.60, 1.25G 150PSI BASIC E1  
RUN 197 TP 3

LEGEND  
SYM CH PARAMETER  
□ 71 VEL-3RT



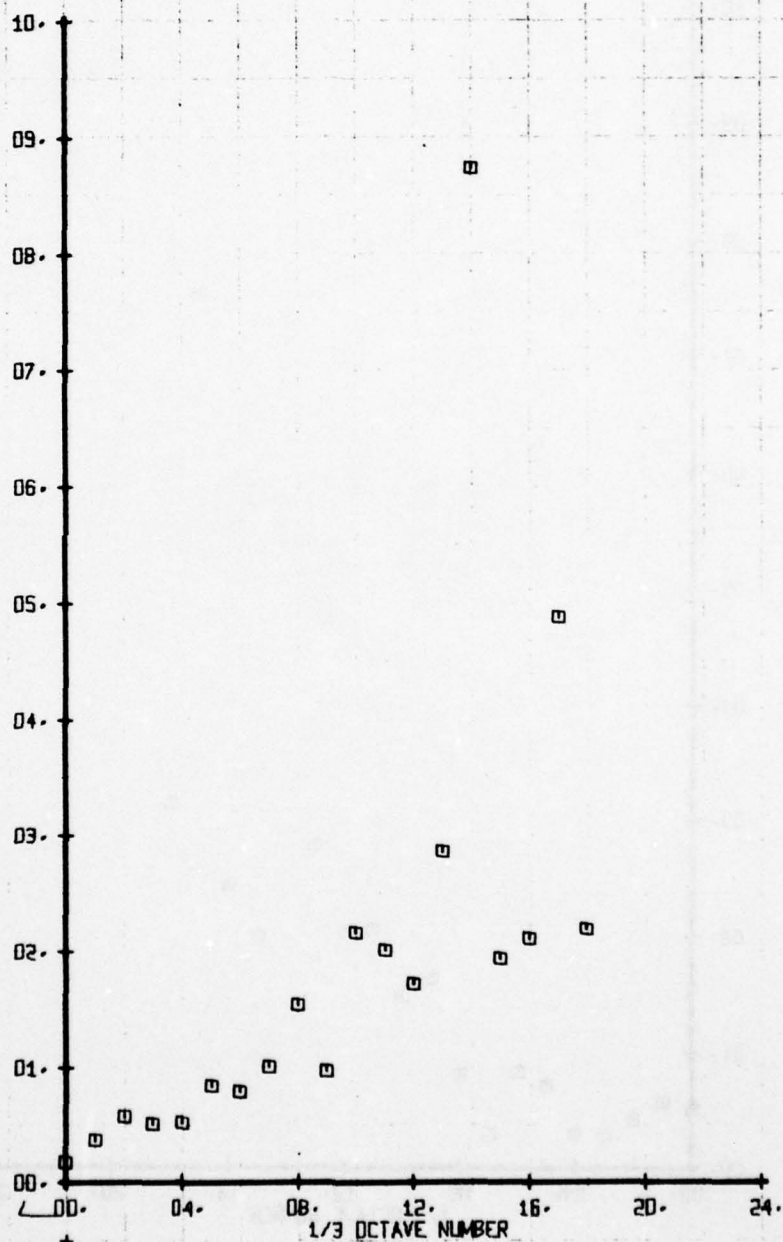
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. 7.60, 1.25G 150PSI BASIC E1  
 RUN 197 TP 4

SYM  
 □

CH  
 71

LEGEND  
 PARAMETER  
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



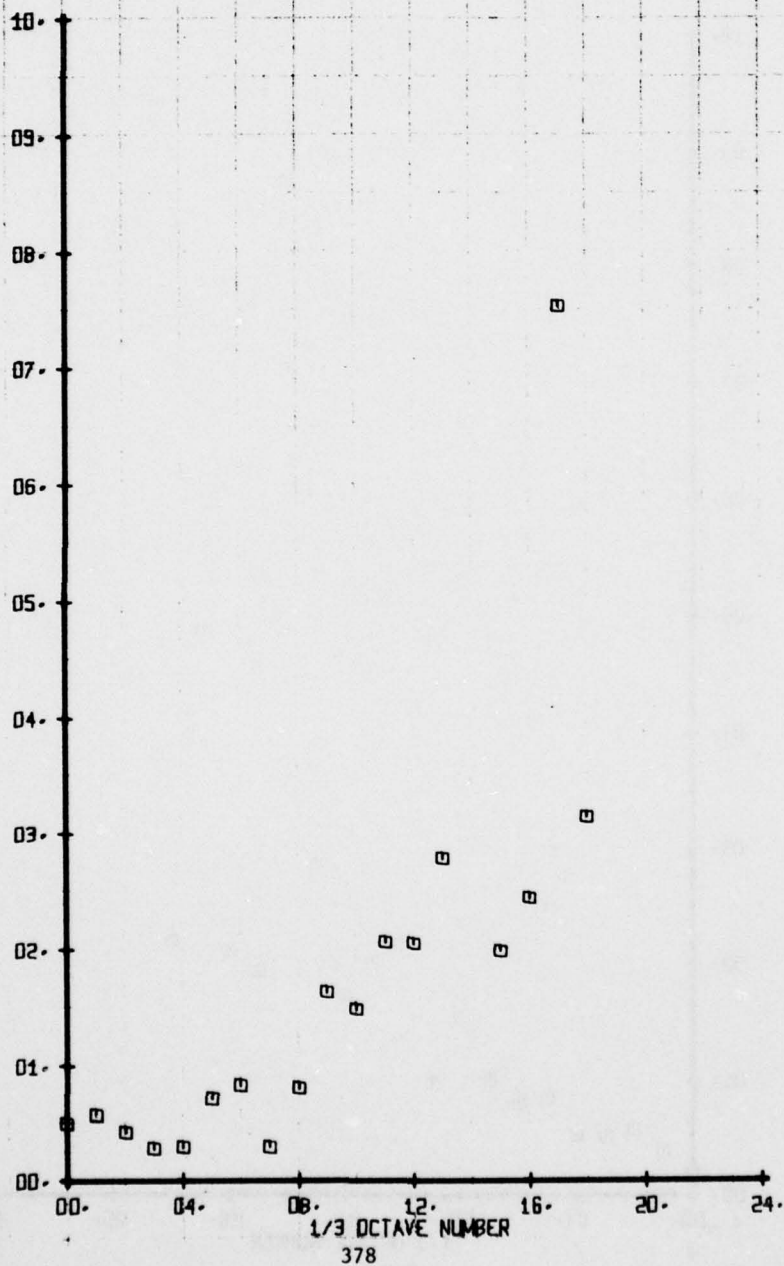
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. 7.60, 1.25G 150PSI BASIC E1  
RUN 197 TP 5

SYM  
□

CH  
71

LEGEND  
PARAMETER  
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

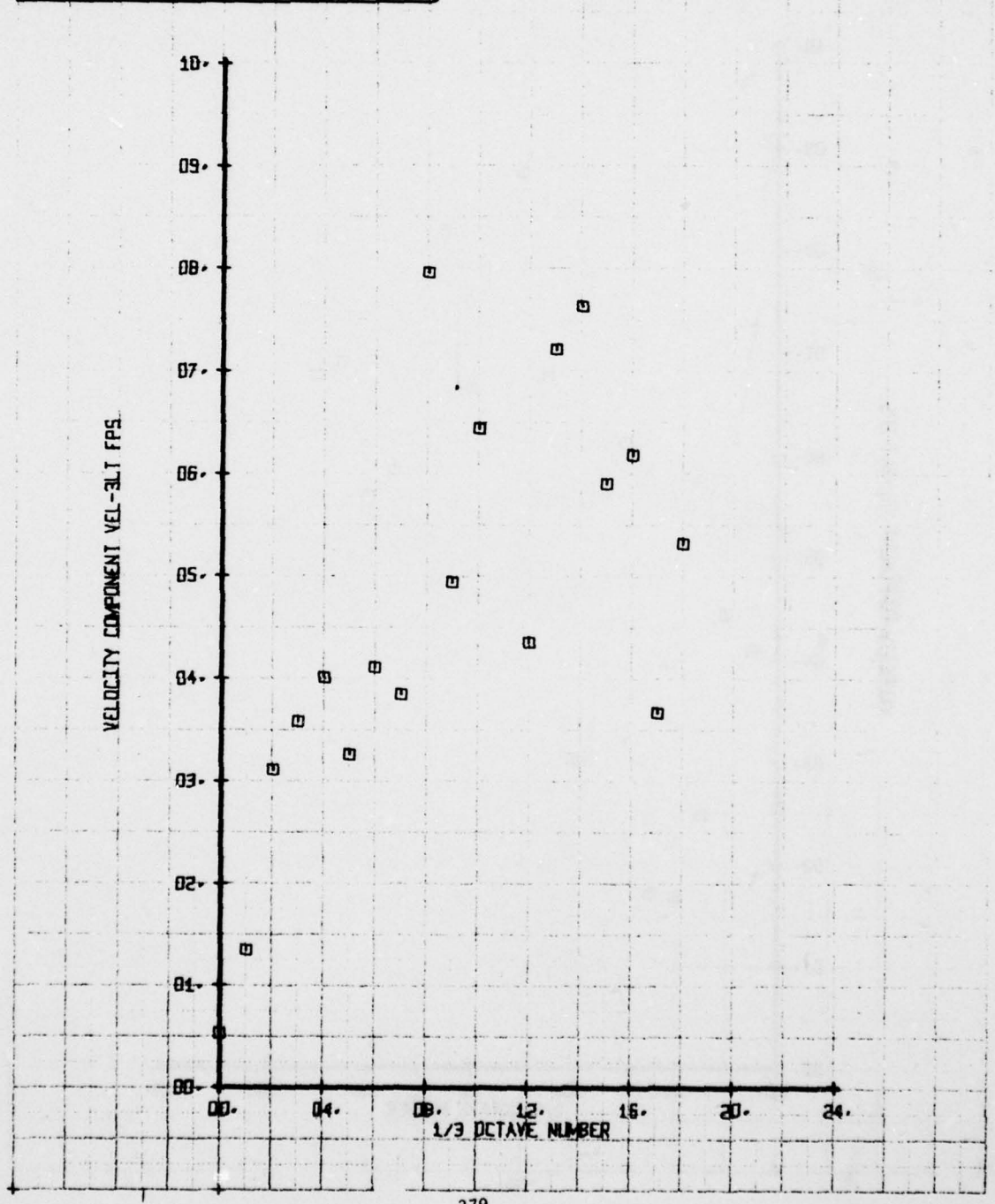


378



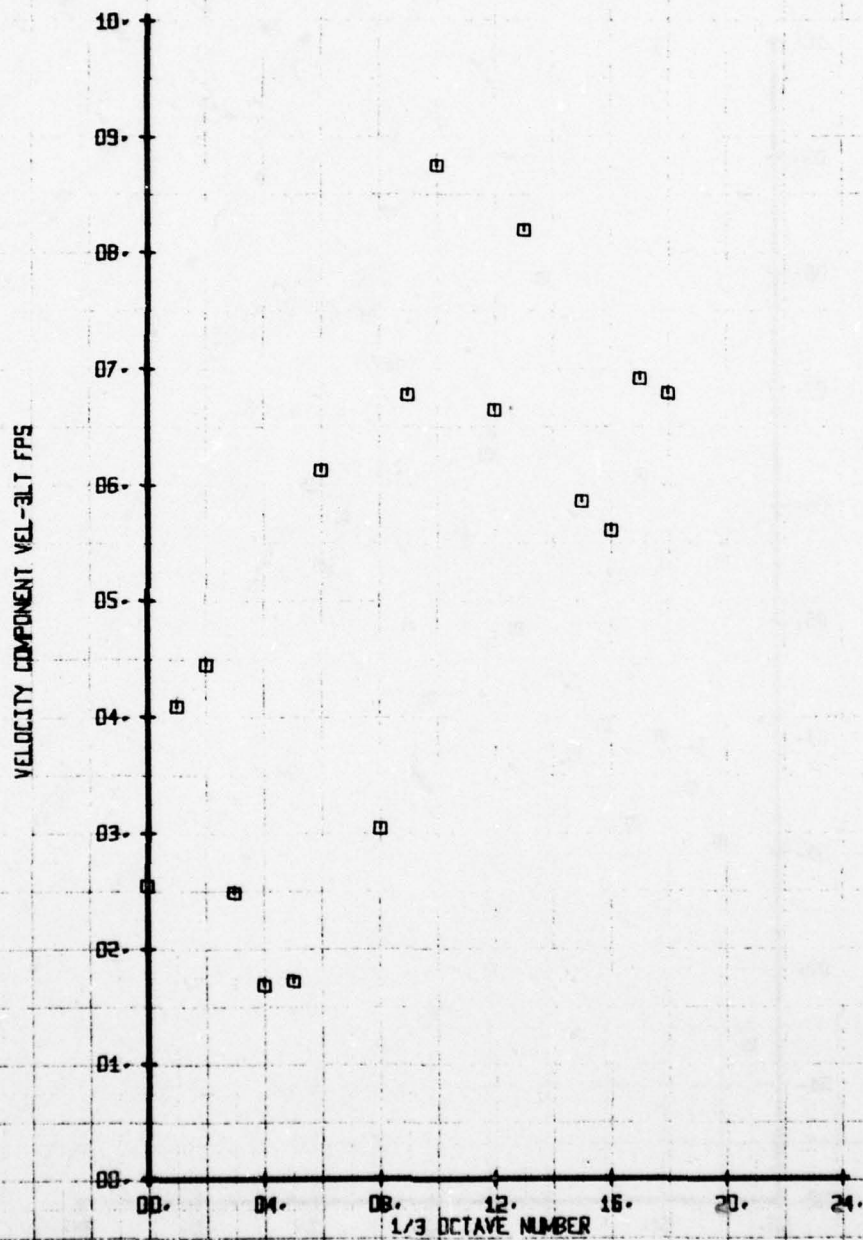
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJCT. 7-60, 1-25G 150PSI BASIC E1  
 RUN 197 TP 1

LEGEND  
 SYM CH PARAMETER  
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
AIR EJECT. 7.60, 1.25G 150PSI BASIC E1  
RUN 197 TP 2

LEGEND  
SYM CH PARAMETER  
□ 70 VEL-3LT



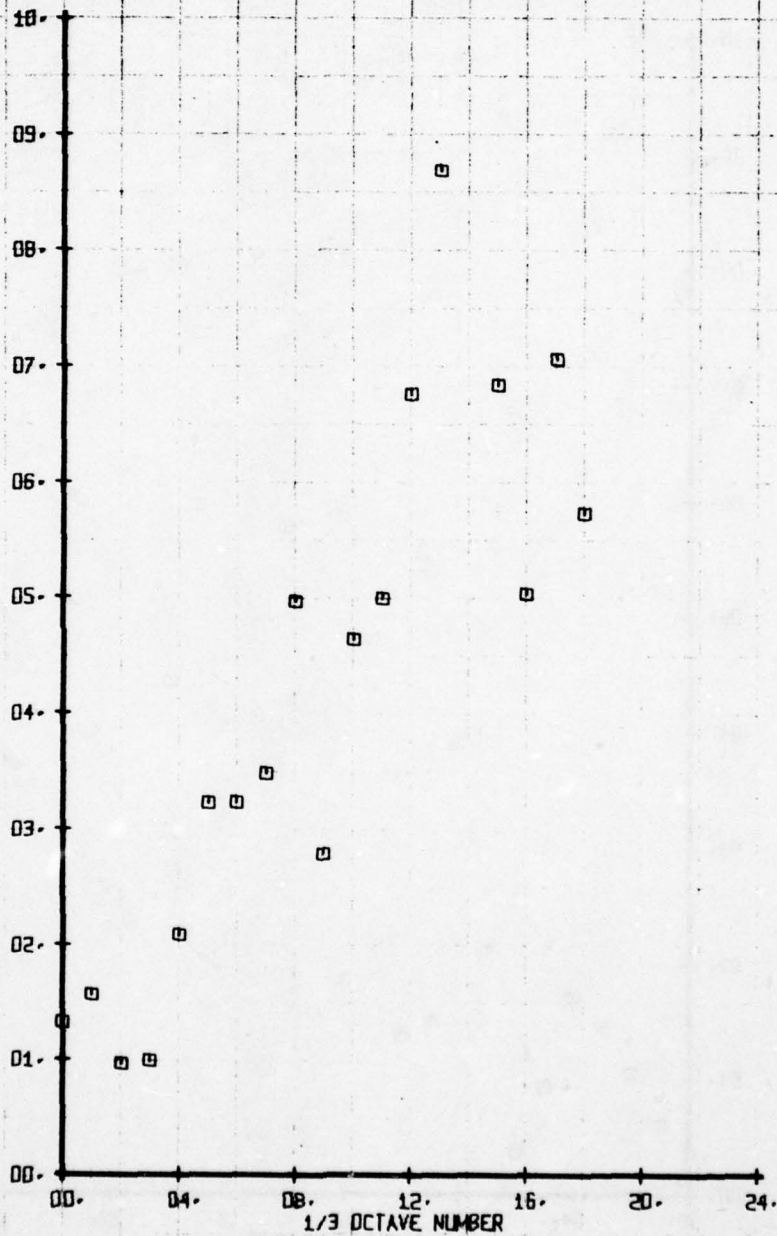
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. 7-60, 1.25G 150PSI BASIC F1  
 RUN 157 TP 3

SYM  
 □

CH  
 70

LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS





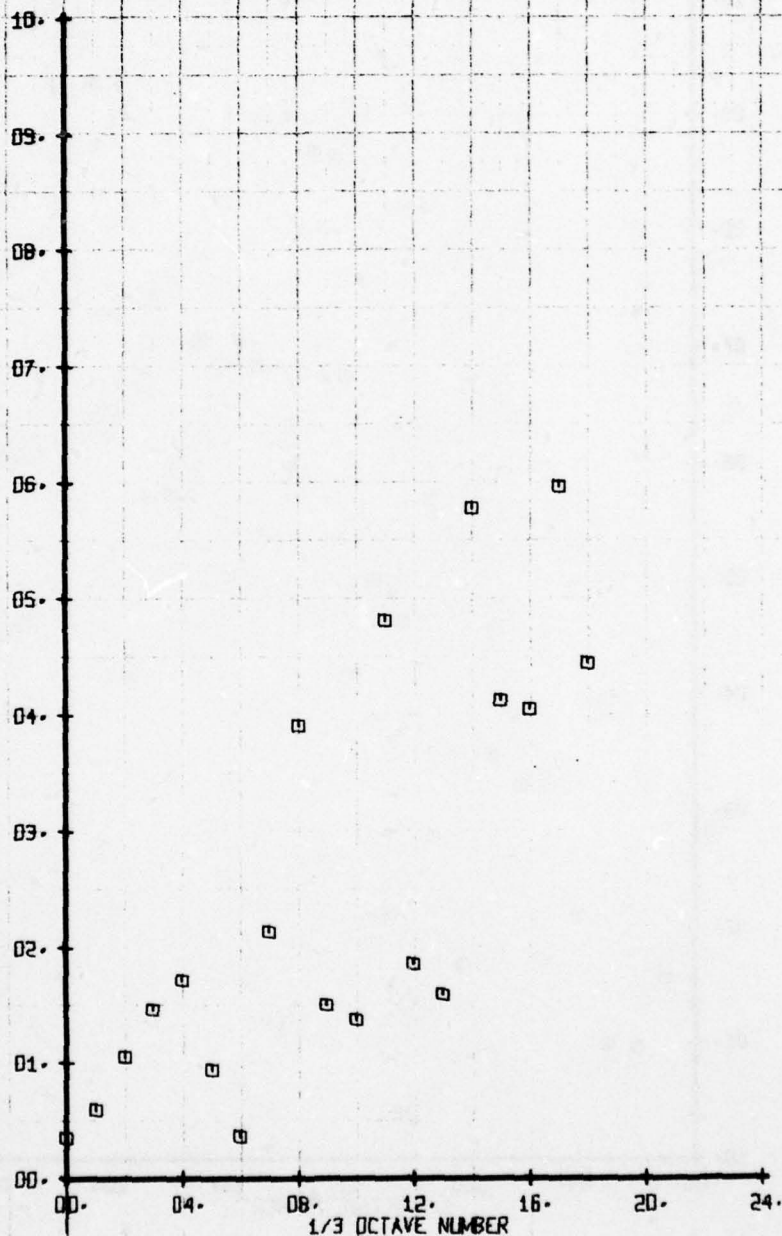
HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. 7.60, 1.256 150PSI BASIO E1  
 RUN 197 TP 4

SYM  
 □

CH  
 70

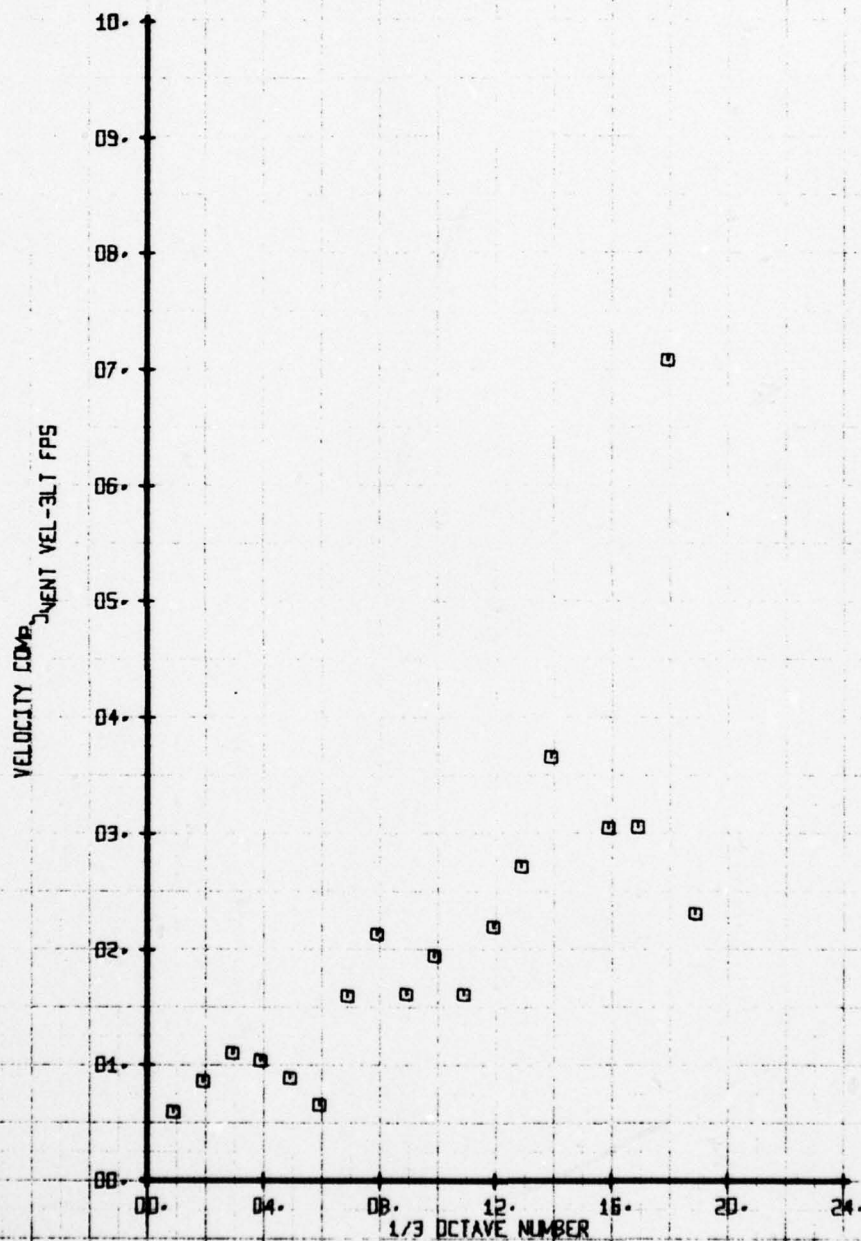
LEGEND  
 PARAMETER  
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS  
 AIR EJECT. 7.60, 1.25G 150PSI BASIC E1  
 RUN 197 TP 5

SYN CH PARAMETER  
 70 VEL-3LT



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